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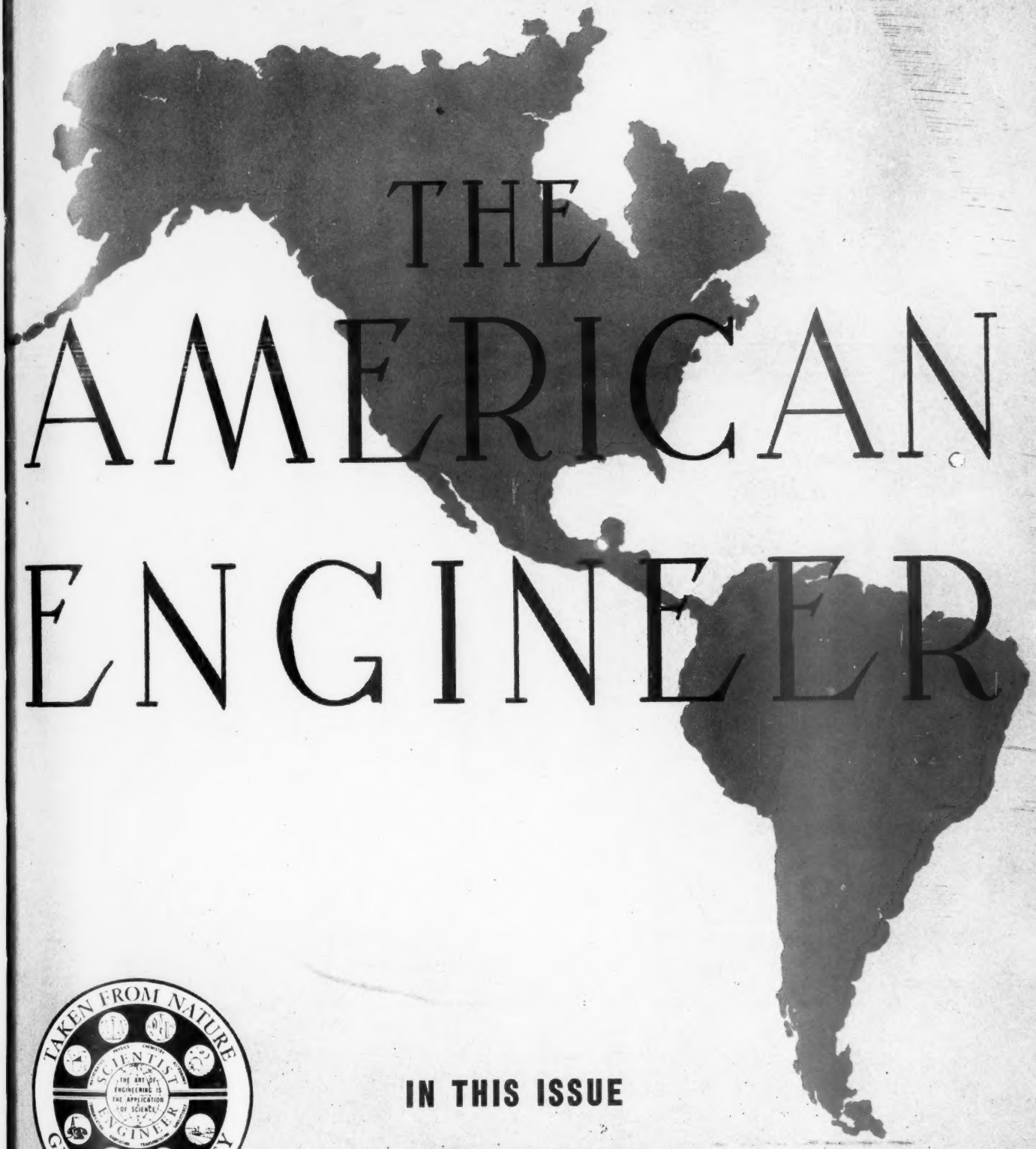

THE AMERICAN ENGINEER

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IN THIS ISSUE

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THE

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In This Issue—

PAGE

Officers—N.S.P.E.—Roster of State Societies 6

EDITORIAL—Public and Private Practice 7

PAPERS AND REPORTS

One Hundred Years 8
The Road to Peace 11
Public and Private Architects 12

ITEMS OF GENERAL INTEREST

Engineers and Unions 15
Personal Publicity 15
Secretary Larson Addresses Pittsburgh 15
Wage Stabilization Act 16

STATE NEWS

Georgia 17
Illinois 18
Indiana 18
Minnesota 19
New Jersey 21
New York 22
Ohio 23
Oregon 24
Pennsylvania 24
Texas 25

WHAT'S NEW 29

PROFESSIONAL DIRECTORY 33

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Public and Private Practice

THE PROBLEM OF UTILIZING BOTH
In The Interest Of The General Welfare
Calls For Reflection And Co-Operation

UNDUE COMPETITION AND CONTROVERSY AMONG ENGINEERS
May Serve Badly Both Public And Profession

During recent months considerable controversy has arisen within the profession over the respective roles, and the fields of activity, of Engineers in Public Service and those engaged in Private Practice.

Civil, as distinguished from Military, Engineering once consisted almost exclusively of services rendered by private practitioners and their assistants. During the past few generations there has been an ever increasing trend in the direction of bureaus and agencies composed of Engineers under the general direction of governmental departments and corporative groups. Federal, State, County, Municipal and other agencies of Government, together with railroads, utility companies, manufacturing concerns, industries and various commercial groups, maintain large technical staffs with which to plan, design, construct and operate their engineering activities, usually on a salary basis.

The call for planning and engineering services, that awaits the end of war, and the opportunity for private practitioners, will be so great that the demand will far exceed the supply. This will doubtless become an incentive for corporate groups to organize and seek engineering assignments in foreign as well as native lands. Existing engineering firms will be tempted to assume types and forms which are as inimical to the continued existence of the private practitioner as are the expansions of government and industry into the field of bureaucratic engineering. In the case of governmental expansion there is a definite justification for opposing the same. Certainly the federal agencies which require engineering services should not plan large organizations of public employees for engineering work to be performed abroad. Both government and employee will suffer when such services are no longer required and the curse of the inevitable lay off is visited upon many who will have entered public service at a sacrifice of income in the hope of securing tenure of office. The employee of the expanded private corporation or firm will face a similar situation. Can the profession provide against this contingency?

Both government and industry are continually expanding their fields of engineering activity. Both, it has been stated, now contemplate engineering services for foreign nations and clients on a large scale.

Is this trend toward the bureaucratic form of practice, whether in government or in business, in the best interests of the public and the profession?

May not such practice lead to involvements which will add to the already too numerous responsibilities of government born of foreign investment? Some engineering groups have already protested the over-expansion of governmental agencies in the field of engineering practice. Others have regretted the same tendency upon the part of large corporations and companies.

Obviously, both tend to eliminate the private practitioner of engineering save for possible consultant services. What position should the Professional Engineer take, bearing in mind the public interest as well as his own? Arguments to be effective must make the general welfare paramount. One thing is essential for the future of the profession; the practioners thereof must resolve their own opinions to such extent that engineering can present a united front. Each faction should plead the cause of the other whenever the opportunity presents itself. Neither should seek to eliminate or injure the professional rights of any engineer. When both are busy the ground for dissatisfaction will disappear. Keeping both active and occupied should be an objective to which all can subscribe.

That this question is not confined to engineers may be vouched for by reference to the concern of the legal and medical callings over the subject of socialized professions. During the past decade or so there has been a rather strong trend toward architectural bureaus upon the part of governmental agencies. In recent issues of the Journal of the American Institute of Architects the question has been discussed in a manner befitting professional men. A similar approach to this problem would aid engineers in consolidating the profession. Engineering has enough to contend against without indulging in further internal controversy.

ONE HUNDRED YEARS
OF AN ORGANIZED MEDICAL PROFESSION
POINTS THE WAY FOR PROFESSIONAL ENGINEERS IN THEIR EFFORTS TO ACHIEVE SIMILAR STATUS

A. M. A. and N. S. P. E.
HAVE PARALLEL ORGANIZATION FORMS

From An Address Before M. A. P. E.
By DR. E. M. HAMMES

In an address to the House of Delegates of the Minnesota Association of Professional Engineers, E. M. Hammes, M.D. of St. Paul, Minn., recently outlined the development of the professional medical society in that state. The problems and progress of the Minnesota Medical Society, organized ninety-two years, are similar to those of other state medical societies. In the light of time and experience, the Minnesota Association of Professional Engineers has made remarkable progress toward the goal of an organized engineering profession. The maintenance of high standards, of conduct, of preparation, self-regulation of practice, manifestation of concern for public welfare, collaboration with other professions and society membership, are suggested as justification and activities for the professional organization.

This address should be of interest to Engineers in every state and it is suggested that the several Professional Engineering State Societies might follow the example of Minnesota and seek counsel from the State Bar and Medical Societies. There are still too many members of the professional engineering societies who think in terms of the organization and methods of the Founder Technical Societies. N.S.P.E. is patterned after, has the same form of organization as, and seeks to parallel the American Medical Association and the American Bar Association, not the A.S.C.E., A.S.M.E., A.I.E., and other technical groups which promote so well the art of Engineering and the Sciences but which are not professional organizations in the same sense as A.B.A. or A.M.A. In these membership is restricted to licensed practitioners of law and medicine. There are no associates, affiliates, juniors, et al. in these organizations; nor are there any such in N.S.P.E.

It is my understanding that you, as engineers, are interested in building up a strong professional organization which will protect the public interest and your professional standards; which will serve as a disciplinary check upon your members and also advance the science and practice of engineering.

I am not familiar with the membership requirements in your society nor with your plan of organization. I do know that you, like physicians, are professional men with extensive training. I know that better public understanding is needed of the value of trained engineering graduates in many fields and that the public would benefit if expert advice were required for all engineering projects, including new housing, in which, I am told, there has been much waste and fraud because men of inferior training are sometimes employed in the capacity of qualified engineers.

I am aware, also, that we doctors rely upon the integrity and expert knowledge of engineers at many points in the practice of medicine and that the public health has been advanced immeasurably through your achievements as civil and sanitary engineers, in the protection of public water supplies and the safe disposal of sewage, and in the eradication of disease-bearing insects and rodents; as electrical engineers in the development of modern equipment for diagnosis and treatment; as architectural engineers in the building and equipment of hospitals; as chemical engineers in the detection and control of industrial poisons, and in the volume production of new chemicals and biologicals; as highway engineers in the construction of good roads which bring the best medical facilities close to the patient in remote districts.

For all of these reasons I am especially happy to have the opportunity to tell you whatever I can about our physicians' organization in the hope that it may be of some assistance to you in strengthening your own. The parallel between engineering practice and medical practice lies chiefly in the fact that both are learned professions and both are essential to the public welfare. The results of malpractice in engineering, gravely injurious though they may be to the general welfare, are probably not so immediately disastrous to the individual as malpractice in medicine. That may be the reason why the organization of doctors developed early and became an indispensable part of our system of public protection today. It is true that the British Medical Society antedated our American organization by many years; but the British association plays a relatively small part, as I understand it, in the habits and professional life of the ordinary general practitioner in Great Britain. Here in the United States, on the other hand, membership in the local medical society is as much a part of the investment of the young physician starting out in practice as his stethoscope.

Medical organization is more than one hundred years old in the United States. The American Medical Association held its first national meeting, however, in 1847. Representatives in the early years came mostly from eastern and southern states. But the young states and territories of the West organized local components of the national organization almost as soon as the first handful of doctors established themselves on the frontiers. And in Minnesota, at least, one of the earliest acts on record was to name a delegate to attend a national meeting of the association.

The history of our organization here in Minnesota is typical and may be of interest to you since it shows how medical men, even under the most primitive pioneer conditions, felt the need of association with their kind, the stimulus

of comparing notes on their experience and the need of their combined strength in combating the activities of the quacks and fakes of all kinds who flourished in all the settlements of the early days.

The Minnesota Medical Society was organized 91 years ago, on July 23, 1853, in the Old Court House of St. Paul. There were about 20 hardy pioneer doctors in the territory and most of them were present at the Court House that day. Many of them practiced in St. Paul, but some came from St. Anthony and a few from as far away as Winona, down the Mississippi. Dr. Thomas Potts of St. Paul was elected president of the new society and continued in the office at successive meetings during the next few years. Dr. John H. Murphy of St. Anthony Falls was the delegate of this little outpost of medicine on the Mississippi to the American Medical Association and attended at least two meetings of the national organization in that capacity.

The state organization lapsed temporarily during the Civil War years, but was reorganized under its present name and, virtually, with its present structure in 1869. In the meantime, county units had organized in all of the older and more populous settlements, and they became a functional part of the state organization, just as the state was a functional part of the national body. The county or district society, the latter being a society formed of members from groups of counties where members are too few to warrant a separate county organization, is the basic unit of the organization and from it stems the fundamental disciplinary controls of the organization. The county society determines who shall and who shall not be invited to membership and who, if the situation arises, shall be dropped for misdoing. Members in good standing of the county or district society automatically become members of the state and national organization and there is no other entrance to membership, barring some courtesy categories, except through the assent and approval of colleagues in their own community. Membership is thus no meaningless rubber stamp applied to anyone who can pay his annual dues. There is a board of censors in each society. This board passes on every application and every applicant must have two sponsors from the membership who stand as guarantor for his probity and reputation. It goes without saying, of course, that the applicant must also be licensed to practice in the state which, in Minnesota, means that he must be a graduate of a reputable medical school. He must have served at least a year's internship and have passed the basic science and medical board examinations required by our law.

Membership, then, has naturally and inevitably come to be accepted, not only by fellow physicians, but by all institutions which deal on a selective basis with physicians, as a basic requirement for practice. Furthermore, such acceptance is virtually mandatory on the physician who wishes to practice good medicine and to rise in his profession. Thus, every doctor who is not engaged exclusively in laboratory work, or research, or employed in certain special positions on a salary basis, must have hospital connections in order to give good service to the sick. But hospital connections, like membership in the county society, are determined on a selective basis by the staff and governing board of the hospital in question. This situation applies, and its legality has been upheld, in tax-supported, as well as in the so-called voluntary hospitals. And membership in the county or district society, as the case may be, is required by all hospital boards and staffs, not only for full staff membership in the hospital, but for what are called "courtesy" memberships which permit a doctor to take his patient into a hospital.

Service for insurance companies, civic appointments of all kinds, and court work, all of which legitimately swell the practice and prestige of the doctor, are, as a matter of policy, offered only to men who are members of their societies. It is naturally assumed that there must be a reason, and the reason must not be to the credit of the physician, if he is not accepted in the society of his peers. It is true, of course, that not all well qualified doctors are members of organized medicine. There are always a few rebels, "lone wolves," so to speak, who refuse to fit themselves into any organized pattern. But the majority of members among reputable practitioners is so overwhelming that the card of membership is justly regarded as a basic requirement for practice by the physician and all who deal with him.

The convenience and expediency of this situation is obvious from any point of view. The validity and wholesomeness depend upon its vitality, of course, and upon the actual exercise of disciplinary power for the public good by the society. In general, I think I may say from personal observation over a good many years that the control has not become a dead letter and that its effect has been salutary. To be sure, it is not an easy matter to drop a man from membership and such extreme measures are not resorted to frequently, chiefly because, with proper selection in the first place, the occasion does not often arise. Safeguards are properly thrown around the privilege of membership and it would be difficult, if not impossible, for such action to be taken out of spite or jealousy. Any man cited for such action, is entitled to a hearing before his own society and may appeal to constituted bodies of the state association and from there to the Judicial Council of the American Medical Association if he desires to do so. On one occasion, at least, the Judicial Council of the American Medical Association has been instrumental in restoring a man to membership who had been dropped by his county society. In this case, he was restored on the ground that the process employed by the County Society had not been legal and valid.

The question of whether or not a man shall be admitted or dropped from membership to his medical society, therefore, does not hinge upon personality or social background. Membership has a financial and social value; but it is open to all alike provided they are licensed to practice under our Minnesota law, and provided they are honest and ethical practitioners. In case of conviction for a felony, of course, a man is automatically dropped from membership and must apply as a new member if he is to be readmitted at all. It is thus evident that the local county society, composed of associates in the same community, is responsible for most of the disciplinary controls of membership. There is, however, a general supervision and control on the part of the

state organization, also, which is equally definite in its way. The state medical association is composed of members of all the county societies in the state and each county society elects its delegates, on the basis of the size of its membership, to the House of Delegates, legislative body of the organization. A council of nine members constitutes the executive body of the organization, carrying on the affairs of the association between meetings of the House of Delegates. For administrative purposes, the state is divided into nine councilor districts and the members of the Council are elected by the House of Delegates to represent each of these districts. It is the duty of the councilor to keep in touch with affairs in his own district, to advise and adjust, in case of differences, and generally to represent the feeling and wishes of his district in the deliberations of the Council. The American Medical Association is organized on the same basis, each state association having representation according to membership, in its House of Delegates and the Board of Trustees, composed of representatives elected by the House of Delegates from nine districts of the country, functioning in the same manner as the Council of the State Association.

Before we leave the matter of disciplinary control of members, I should like to tell you something about one phase of our control which stems from the state association, because I have been intimately connected with it from the start, and it is an example of how special problems are handled in our organization. This particular problem has to do with expert testimony given by physicians in court, and before judicial commissions. There have been, as you perhaps know, some isolated instances of abuse of this function of the physician which were so flagrant a few years ago that the officers and Council of the Minnesota State Medical Association felt called upon to take action. The situation was complicated and difficult to handle for many reasons, chief of which was the fact that, here the conduct of the physician was linked with the whole system of court procedure. It was finally determined, after consulation with distinguished members of the bar and of the Supreme bench, to create a state committee on medical testimony of which I was appointed the chairman. This committee was to investigate all cases where a physician might be suspected of abusing his function as an expert witness if the case was reported through the proper channels. A complete transcript of the testimony of the case was then to be studied by the committee which in return would refer disputed points to other qualified experts. If the committee found that the complaint was justified and the facts warranted it, the findings would then be referred to the Minnesota State Board of Medical Examiners for whatever action the Board might wish to take. It should be explained that the control of the state medical association is limited only to the bestowal or withdrawal of membership in its ranks. But the Board is the official licensing body of the state and may, upon a showing of due cause, revoke a man's license to practice or suspend it, according to its judgment and findings. The Board may also call an offender in for warning and these warnings are often highly effective. Such a warning was given quite recently on the basis of recommendations made to the Board by the Committee on Medical Testimony. I may say, however, that the total number who abuse their function as expert witnesses is small at any time, and few, if any, complaints have reached the committee of late. It is our hope that the mere fact of the existence of the committee and its demonstrated readiness to make an impartial investigation and report its findings to the authorities, has been a chastening influence.

So far, I have dealt with medical organizations as a force for controlling the professional behavior and honesty of its members because it seemed to me that you might be especially interested in that phase of our activities. Actually, of course, physicians are organized into societies chiefly for mutual scientific advancement and scientific advancement has continued to be the principal function of our organization, from the smallest county society up to the American Medical Association. Every society has its regular scientific program and its committees working on scientific and public health problems. If it is a large society supplied with funds it also has a library, lectureships, special scientific sections. Every state association in the country publishes a scientific journal. Our Minnesota journal is called Minnesota Medicine and ranks high among medical publications of the country. The state association also supplies its members with a monthly packet of recent scientific information on subjects of current interest, assists in supplying guest speakers for county society meetings, aids in post-graduate programs for physicians on the University campus and provides expert scientific advice on call for many outside agencies and organizations. And, of course, it stages an annual scientific meeting of three days which is one of the best and largest in this part of the country. Its scientific committees are active and often assume leadership in public as well as in professional education. Physicians in their own organization are constantly at work on many problems of disease control and health protection.

The functions and scope of the American Medical Association as a scientific body are so many and so varied that I can mention only a few of them here. Most conspicuous of its accomplishments for the public good has probably been its long and successful fight to close the diploma mills and bring the standards of medical education and practice to a point where they are higher, not only for the specialist and expert, but for the common practitioner, than anywhere in the world. It has performed a like service for the hospitals and has steadily, through its Councils and publications exposed the quacks and frauds that prey on the sick. It publishes many scientific journals, sponsors and stimulates much research, stages great scientific meetings, devotes time and funds to the promotion and protection of the public health.

As you all undoubtedly know, organized medicine has its critics. But they do not criticize us on the score of our scientific progress nor the quality and standards of medical practice. And quality has, after all, been the main preoccupation of organized medicine for more than a hundred years. It is true that there are some people in the United

(*Continued on Page* 27)

THE ROAD TO PEACE

CONCERTED ACTION BY ALL NATIONS

BASED UPON SPIRITUAL VALUES

AFFORDS THE ONLY REAL HOPE

FOR THE FUTURE OF SOCIETY

RECOGNITION OF THESE PREMISES

Should Begin At Peace Conference

By MAURICE DEUTSCH, *Consulting Engineer*

MAURICE DEUTSCH
Engineer-Consultant

In this article the author, a well known consulting engineer, discusses the question of materialism and refers to the opinions of distinguished men of science, on the subject of the role of science in promoting the way to a better civilization. The necessity for placing spiritual values above selfish gain, by labor, capital, government and other elements of society is imperative if the ends of peace are to be advanced. The decisions of the Peace Conference shauld be built upon this concept.

How can we ever expect to prevent world wars until we find a way of peace and cooperation in each individual country, between capital, management, labor and government? How can we attain a second step along this way of peace, until we all strive to secure the cooperation of all nations? This cannot be accomplished without the advice and aid of great peoples. Only then may the ultimate aim of World Federation for peace be realized.

For thousands of years, as related in Biblical history and war upon war since then, the inhumanity of man has increased, but mainly due to false and incompetent leadership. With the right leadership, guided and governed by Principle, all discordant conditions may be reversed. A nation without vision will perish, say the Prophets. Is it not therefore advisable that long-range objectives be considered in unfolding all national and international policies?

In this generation we seem to have been confronted with the major consideration of whether capital and labor can be maintained in harmonious employment for human progress. Every normal human being desires to be gainfully employed to establish healthful and joyous activity. Why has every war brought about disturbed and discordant conditions of employment which resulted eventually in an even greater war of confusion and destruction? What may we expect after 1944? Should it not now be apparent to all thinking men that some radical change in thought from that of past ages must be sought if we are to prevent repetition of past mistakes with their cataclysmic results in false prosperity, misery, wars and death?

It has been frequently noted that while able leaders in spiritual and material progress exist in every country they are rarely in control of Government. Why? Competency first, rather than political expediency, must govern.

Is it not most important that we impress upon our children and their parents the fact that happiness and success can only be lasting if they adhere to the basic religious and ethical principles of our forefathers? Without honesty or with a weakening sense of its vital importance the individual, the community and the nation will find themselves on the skids that lead with increasing speed into suffering, misery and defeat. Let us take heed of the following pertinent reflections recently made by forward-looking citizens: "The roots from which economic disorders grow are the same roots from which wars spring." "Starvation in the midst of plenty is not a paradox. It is a declaration of moral and intellectual bankruptcy."

If our form of national democracy, made possible by our Constitution, is to continue to stimulate private, individual initiative and enterprise as it has done during the past 160 years, to the astonishment and envy of the rest of the world, then does it not now seem apparent that some reformation in our economic and social system or way of life must be sought? This must be consistent with the basic principles underlying our Constitution. For the original framers of our Constitution, "our way of life" during the past 160 years were divinely inspired when their guide and motto was "In God We Trust". We can't go wrong if we let God be our guide in this much-needed reformation.

In this connection the writer recalls four statements of such great spiritual value that he desires to refer to them herewith: Two of our greatest scientists and philosophers of this decade before passing on left with us a legacy of thought inspired by a life of activity and progress not heretofore recorded in the annals of history. Charles A. Steinmetz, one of the great scientists, who contributed so much to the development of the General Electric Co., stated in 1923 before he passed into that spiritual realm to which he referred in the following guiding message:

"Some day people will learn that material things do not bring happiness and are of little use in making men and women creative and powerful. Then the scientists of the

(*Continued on Page* 28)

PUBLIC AND PRIVATE ARCHITECTS

THE BUREAU IN ARCHITECTURE

INDICATE THAT A CURRENT PROBLEM

CONFRONTING THE ENGINEERING PROFESSION

IS SHARED BY A SISTER CALLING

SOME OPINIONS AND COMMENTS THEREON

By Prominent Members of A. I. A.

FROM THE JOURNAL OF THE AMERICAN INSTITUTE OF ARCHITECTS

PUBLIC AND PRIVATE ARCHITECTS

By Otto R. Eggers, F.A.I.A.

Note: The reader is referred to this month's Editorial in The American Engineer wherein the subject of these comments by members of the Architect's Profession is applied to the current agitation over the trend toward control of the practice of Engineering by agencies rather than by individuals. Some time ago the American Engineer published two contrasting opinions concerning pending federal legislation. Because of the somewhat strongly expressed opposing views the matter has not been publicized further in these columns. The approach to the subject upon the part of the Architects herein quoted is suggested as a good one for Engineers. Unity of the profession is as essential to the Engineer as to the Architect.

"Architecture is good or bad, dependent solely on its merit and not upon the status of the individual who produced the design. It is not my point here to weigh and analyze what is good architecture as distinguished from bad architecture. I have my own ideas, of course, but I am not asking anyone to accept my conception of good architecture.

I am, though, puzzled at what seems to be be a growing schism between architects in private practice and architects in government agencies — federal, state and municipal. My bewilderment increases as I wonder why there should not be a very close relationship between all architects rather than a chaotic disunity.

Perhaps I am not close enough to the facts, because for quite a few years I have been tied to a pencil and have not mingled enough with my fellow architects or taken part in their arguments both pro and con. During the last few years certain conditions have been brought home to me more forcibly than ever before. If I could illustrate this, rather than write about it, I would sketch the United States in the background, woefully lacking in new construction, while in the foreground I would show the architects, first debating individually in small groups, then each group debating in turn with other groups. I do not mean to be hard on my own profession and imply that as architects we might have been good lawyers. On the contrary, I want to be constructive. I sincerely hope a way can be found speedily for all architects to be members of one national organization. If this is not feasible at the moment, why not have a joint committee selected from the existing societies?

That there is a cleavage today between private architects and architects in government agencies on the subject of public construction is just a truism. It is a perennial matter in some state legislatures, in courts of law, in organizational periodicals and in architectural meetings. This problem has come home to me because of the war, and in thinking about what will be the state of affairs after the war. The problem appears to be more complicated than it may actually be, if some real, statesmanlike architects were to sit down together and agree to agree rather than, as at present, just standing off in corners presuming much without doing anything about it. I think both groups can take a little blame for this.

It is just not true that good architecture can come only from the ranks of the private architect; it is equally false that because an architect is part of a government agency his architecture must be bad. Such suppositions are grossly unfair. During the past two years it has been my privilege to meet some of the architects and some members of their staff in the Navy Department. I do not single them out purposely but simply because it came about due to business with this Department. I was most agreeably surprised to note the high architectural quality of the work done, and being done, by the men of this Department under the inspirational leadership of Mr. Howard Sullivan. This staff has a true vision and zeal for good architecture.

The architectural department of New York State, under Commissioner Haugaard, has been responsible for some fine examples of good architecture. I have seen some Veterans' Hospitals, which I believe they designed in their own Bureau, which are real contributions. There are probably many more examples but this suffices for the moment on the question of relative merit.

There is a definite need for architects in governmental departments. There are problems at times, particularly those of security, which for many reasons can be more efficiently and expeditiously handled within a bureau. I advocate that architects in government agencies should occupy a distinguished position, be adequately paid, and that all architects should collaborate to increase the caliber of such govern-

ment architects. Good architects within governmental bureaus can concentrate on problems peculiar to a governmental function, and with even limited assistance can prepare sound schematic plans. Government architects should play a major role, moreover, when public buildings are being constructed, and serve as liaison officers between the government, the private architect, and in certain instances the general contractor.

I can understand the problem of many men who are in the government service. They went, perhaps, in the beginning, just to a job. Their services were extended; their salaries may not have been comparable with those in private endeavor, yet there were pensions, promotions, and other considerations. That job became a matter of fifteen years, possibly twenty or more. Maybe retirement was not too far away. Now a specter appears in the form of no job at all, because the work will be done by private architects. Yes, it is a human problem, and there will be the problem of those who will return after this war. These are questions in which all architects should be interested.

There is a side to this question which is fundamental. I would like to mention it here, but its ramifications and application should evolve a modus operandi through clear thinking and planning by broad-minded architects of both groups. Public buildings, particularly those of importance, belong to the people. The private architect is an important part of our system of free enterprise. Aside from the question of architectural attainments, the question of free enterprise is more fundamental than any provincial disputes. Wherein free enterprise prospers, this country will prosper; what weakens free enterprise weakens the fiber of this country.

I am not impressed with what I hear about Government economy in the practice of architecture. If economy is responsible for certain poor examples of architecture, and there are some, then I think we have effected economy unwisely and detrimentally.

We as architects have a double-barreled responsibility. We have had a specialized training and our nation has a right to expect much from us. We are a young nation, relatively, and we can stand much abuse, but we will mature, and as we do so, we must grow apace culturally as well as industrially, agriculturally and scientifically. Our architecture is one of the most important exponents of our culture. We have also music, art, literature and other cultural attainments.

This problem is not such a big problem after all. There are, and will be, government architects; there are, and will be, private architects. Both, as architects, have their sphere of usefulness. Much is lost by not knowing each other better in an organized way; much could be gained if all could meet and discuss mutual problems frankly, with complete recognition of each other's position. Would that this were so, and especially a few years ago! The engineers have done a wonderful job, but so have the architects. Is it not possible that with cooperative team work both groups of architects could look out upon the future from a somewhat higher elevation?"

THE BUREAU IN ARCHITECTURE

By A. Gordon Lorimer
Chief, Bureau of Architecture,
City of New York Department of Public Works

The inception and growth of the Bureau in architecture has been a natural result of the steady increase in the number and magnitude of public projects — Federal, state and municipal. The volume and complexity of large capital programs of construction demand an organization for unified control. What form should this control take — a purely 'administrative' bureau or a 'design' bureau?

A prime factor in favor of the Design Bureau in the execution of public structures is continuity of effort. Where no organized design unit exists, projects are of necessity isolated items executed independently by private architects. In this case, both the project and the architect are hampered by the following conditions:

The architect is retained for the execution of a specific requirement, controlled by certain preconceived costs, and based on a program of requirements created by non-architectural bodies. Bound as he is by contract time and the restricted nature of the individual assignment, the architect rarely has the opportunity to produce a result which is not only integrated with its own parts but which in the broader sense is related and consistent with the other projects of the agency for which he is working. The mere economics of keeping his design expenditures within the fee normal to a single project will generally prevent him from going beyond the most obvious and literal execution of his contract.

This condition has, in the past, resulted in many large public institutions 'growing like Topsy,' with each increment forming merely a temporary stop-gap. In such cases, the building requirements are usually formulated by lay groups, or in cases of hospitals, by medical groups who do not have the basic training in comprehensive planning to project an orderly growth for the institution.

The Design Bureau has both the opportunity and responsibility to plan with an overall viewpoint for a proper succession and relationship of individual projects.

In this regard, the Bureau may have to conduct extensive statistical or social research, and present for the consideration of proper civic or governmental authorities not merely attractive pictures of a projected project but a coherent presentation of (a) the need for the project, (b) its relationship to a long-range program of development, (c) the economics in terms of its use over a bond period of say 30 years, and (d) its budgetary requirements in operation and maintenance.

In a large city or governmental unit, consideration of certain of these factors is a primary responsibility of a planning or budgetary commission. It is, however, very difficult to assemble the requisite data for such consideration without a properly developed design unit, equipped to make comprehensive studies and building cost analyses.

This does not mean that there is no place for the private architect in the broader planning phases or individual project design of public works. What it does mean is that

a central design body must exist, through which private architects, retained for broad or specific planning, can be most readily given the required basic data, and given such guidance as is necessary to assure consistency of policy both as to occupancy requirements and maintenance problems.

In private practice, the architect is apt to be too much absorbed in the quest for new work or the execution of current work to put much study into the occupany or maintenance failures of his previous creations, unless they were frankly so bad that complaints developed. The Design Bureau, however, is often charged also with the repair and maintenance contracts for existing projects and is in a position to develop a well of experience which can be drawn on for the guidance of new projects. This cumulative experience is employed in formulating and guiding building programs and is the most valuable by-product of the bureau.

The private architect has claimed that bureau work tends to be unimaginative, repetitive and over-standardized. This criticism has at times been justified, but much fine work of recent years, such as that of TVA, to mention only one agency, has demonstrated that the bureau has opportunities for the keen young professional man, and that total results show a consistency and integrity of purpose difficult of achievement on a completely decentralized individual design basis.

'Standards' are a convenient and necessary means of conveying assembled information and types to the retained architect. In a progressive bureau, however, it is essential that they be considered merely as the starting point for each new project, and that a constant objective be maintained toward improvement of the standard.

Countering the above criticism of 'standardized bureau work,' the Civil Service architects have been generally critical of the quality of contract documents prepared by the average private architect. This point is worthy of careful consideration by the whole profession. In private practice, the architect is generally dealing with a personally selected group of contractors in whom he has confidence and who value his continued good-will for consideration of future jobs. Often the drawings for bids are without details, these being made as the work progresses in construction.

In public bidding, where the award must go to the lowest competent bidder, the contractor often peruses the documents with a lawyer at his side looking for loopholes against which he can plan a future extra. The preparation of contract drawings and specifications becomes a highly developed kind of game in which the architect must forestall every possible evasion, and in which every single contractual instruction to the contractor must be clearly stated. In the well-run public job, there is no room for second guessing.

Also in public work, it is required by law that all projects of a total construction cost exceeding $25,000 be broken down into separate contracts for General Construction, Heating and Ventilating, Plumbing, Elevators, Electrical, etc. This requires a high degree of contract coordination and detail, and at times appears to be regarded as an unexpected burden by the architect.

This requirement is not the result of bureau red tape, but is of real financial saving to the taxpayer. In large projects, the individual contracts may well run to considerable sums. Were a general contractor to be used, with all other trades as sub-contractors, the general contractor would feel entitled to a fair percentage profit and overhead on the cost of each trade in addition to the profit of the subcontractor. Bureau and private architect supervision should be competent to coordinate the efforts of the separate trades and save the costs of the doubled-up overhead and profit.

It has not generally been the practice of architects to prepare detailed estimates showing breakdown of materials and equipment, but rather to rely on an empirical general experience factor, such as cost per cubic foot of similar types of structures. While this approach is considered adequate as a means of arriving at a budget figure, it has been proven not conclusive enough to act as a basis for actual monetary appropriations for the execution of the work. It becomes increasingly evident that in public work a complete material and labor 'take off' is required. In addition to giving accurate information for appropriations, such breakdowns will become of vital importance in preparing statistics of the work provided and materials required from various industries in the immediate post-War period.

The staff of a bureau is best stabilized at a point where it can act efficiently as a coordinating design unit during peak years or in programs of special magnitude, such as post-War planning, most of the individual projects being assigned to private architects; while in minimum years the bureau can largely carry the program to completion. In order that a proper pitch of professional interest, experience and competency be maintained in the bureau, it is necessary that a certain portion of the program be fully executed by the bureau. Such projects form the development and proving ground for improvements developed from observation and operation of previously executed work. The knowledge thus gained is passed on to the private architect in the form of 'Standards.'

"The above premise indicates that the private architect is given relatively little work when the program is at a minimum. This is not without logic. Past economic cycles have shown that large public works programs are required as stabilizers during periods of industrial depression. Of such work, it has been indicated that the private architect receives the major share. During industrial boom periods, the public works program is more likely to be kept on a purely current requirement basis. At such times, however, the architect has ample opportunity in the private practice created by good economic conditions.

"There have been attempts at various times by both the private architect and the Civil Service architects to out-legislate each other from any participation in the design of major projects. I am convinced that proper consideration of the factors discussed here will show that such restrictive action is detrimental to both parties in the dispute and to the major client — the general public. Nevertheless, the fight appears to go on with unabated fury.

"Suits brought by Civil Service groups in New York to

(*Continued on Page* 27)

Submitted as:

ITEMS OF GENERAL INTEREST

Engineers and Unions

From The Christian Science Monitor

of May 12, 1944

TO THE CHRISTIAN SCIENCE MONITOR:

As a reader of The Christian Science Monitor for the past 25 years or more, I find it disconcerting to read an editorial such as that headed "A War Issue" which classifies the Montgomery Ward affair as a matter vital to winning the war and a "necessary expedient of a war economy."

It is the background of the whole picture which justifies the bitter-end resistance of Mr. Avery. He stood upon a contention of legal rights — the letter of the law as well as constitutional principles. The Government stood on the ground of arbitrary War Labor Board fiat, backing up a mistaken decision and an unjustified order with the face-saving device of bayonets and physical force.

We might say that the patriots of our American Revolution were unjustified in stabbing their own mother country in the back over a legalistic quibble over "taxation without representation" or the payment of a few pennies tax on their tea. But our patriots considered "the long-range and basic principles involved" to be paramount to "the necessary expedients of a war economy" in view of the background of King George III's high-handed antagonism to courts of law and to parliamentary interference.

Are you aware that professional engineers such as mechanical, civil, electrical, metallurgical, and other professional men are being forced to consider the repugnant expedient of forming a union of their own to prevent the practice of forcing them to join trades unions, if they happen to be working on a project where the union officials threaten to stop the work if they continue without adherence to whatever union they may be parceled out to? A further dilemma if and when the professional union were formed would be that it could be fought over and assigned to either the C.I.O. or the A.F. of L. regardless of protest against it.

Denver, Colo. C. C. DRAKE

Personal Publicity The Only Kind The American Engineer And The Professional Society Indulges

Deals With Contributions To The Professional Movement

(An Example from The Texas Professional Engineer)

The Editor is frequently in receipt of material that contemplates publicizing an individual. Policy permits only recognition of efforts in behalf of the professional engineering movement. The following is submitted as an example of publicity acceptable to the American Engineer:

Tribute To a Hard Worker

Rembert S. Guinn Is TSPE Stalwart

Every Licensed Professional Engineer should know R. S. Guinn. Why? Because he has given more personal time and has put in more hours on that non-glamorous thing known as 'Work Without Pay' for the Texas Society of Professional Engineers than any other member.

When the Society was organized in 1936, Engineer Guinn was elected Treasurer for the remainder of the year and the year of 1937. R. H. Knipping, the Secretary, resigned to seek out-of-State employment in February of 1937; and the Executive Board appointed Rembert to fill this unexpired term. Rembert was re-elected by the membership to the Secretary-Treasurer post for the succeeding years until the Constitution and By-Laws were revised in 1940 whereby the Secretary-Treasurer was made an appointee of the Executive Board of the Texas Chapter. When this noble and august body, The Executive Board, assembled for the purpose of filling the Secretary-Treasurer post, it found itself with a very small field from which to select its appointee. It can be honestly said, this field was small because the other members did not need a slide rule to figure out the amount of work that was attached to this office of honor. Therefore, Guinn was imposed upon again as the Executive Board requested that he continue as Secretary-Treasurer until someone else could be found to relieve him. This search continued until the Eighth Annual Meeting in Houston, when Engineer Guinn turned in his resignation and the Board could accept it as the Society was financially able to engage the services of a full-time paid assistant to aid the Acting Secretary-Treasurer.

This story of praise can not be completed without citing a few details. During Rembert's tenure of office, he attended every State and Executive Board meeting, every Travis Chapter meeting except three, and also managed to attend many out-of-town Chapter meetings. He attended every committee meeting when requested and acted in an advisory capacity to all committees. He punctually and efficiently handled all of the duties of his office in accordance with the Constitution and By-Laws and insisted that the other officers do the same. Last, but not least, he spent many long hours at night, on holidays and week-ends pecking out Society letters on a portable typewriter. When his friends chided him about working without compensation, his only retort was, 'My satisfaction will come when the Engineers are so organized that they can engage the services of full-time paid employees to handle their affairs as they should be handled.'"

Secretary Larson Addresses Pittsburgh

Stresses N.S.P.E. Policy

"I have read the latest issue of "The Pittsburgh Engineer' with very much interest, and I wonder if I might express a few views on the Engineer-in-Training, in connection with what you have set forth on Page 4 of your April issue.

Almost without exception, those younger engineers with whom I have come in contact have given me the very definite impression that the youngster does not want anything handed to him, and that he would rather win his

EDWARD LARSON
Executive Secretary, N.S.P.E.

spurs in some organization of his own. Further, particularly the seniors in the Universities feel that they are assuming prerogatives not rightly theirs when they are made members of a professional society before they obtained a full legal status and are admitted to that profession by law. Being an engineer member of a professional society, or a junior member, or an affiliate or associate — brand it whatever you wish — does not permit the youngster to hold office. His membership is therefore very perfunctory, and even if he votes his vote does not have any particular effect, since this group is generally and always will be somewhat small in numbers, and consequently small in percentage as related to the entire professional group. Also there is no possibility of the youngster developing his own ideas.

In discussing this matter with one individual, a senior at one of the Southern universities, I heard it put in this way: If, during our college years, we do develop some definite indications of being possessed of initiative or organizing ability, and are then asked to join a professional society in a somewhat inactive, and more or less auxiliary, capacity, during the years in which we are gaining our experience, that is, while we are Engineers-in-Training, we are not given the opportunity to develop further the initiative and organizing ability we may have started to develop in the University. If, on the other hand, we are permitted to organize our own show and to run it ourselves, with the opportunity of making our own mistakes and learning thereby, we will learn much more rapidly, and be far more valuable to the profession and certainly to the professional society, when we are admitted to practice and can become full-fledged and active members of the professional society. As I see it, we gain nothing by being permitted to attend as junior members, because we will in actuality not have any real work to do. Whereas, if it is possible to organize and develop auxiliary organizations which can call upon the parent organization or the professional society when problems present themselves which we are unable to solve, and get the guidance and counsel of the professional members without being dictated to and run by them on anything else which we may be working on, it is my personal feeling that we will progress much more rapidly, and will be of greater use to the profession, and to all parties concerned.

There is another angle to this which is not generally given very much consideration. To make an Engineer-in-Training a member of a professional society necessitates publishing his name as a member in the annual roster of the professional society. The average layman, picking up that book, may be very much astonished to find his neighbor's boy, whom he knows as nothing but a technician, being included as a member of that society. The mere fact that some hieroglyphics may be attached to the individual's name has no significance in the layman's mind. The very presence of the individual's name in that roster signifies to the layman that he is a full-fledged professional man.

There is another point which seems to have been lost track of, and which was well summed up by the Chairman of one of the State Registration Boards in discussing this very thing with the Professional Society of that State. He said that: The state law licenses Professional Engineers, and limits the title to those with such a license to practice. It is safe to say that the public is justified in thinking that the State Society of Professional Engineers is composed entirely of those legally qualified. Now, if this State Society takes upon itself the creation of a junior membership taking in non-licensed men, I intend to bring it to court as a test case, and have the State Society enjoined to eliminate from its ranks anyone but those who are legally qualified to use the term Professional Engineer. I intend to do this in a friendly manner, but I do not believe that a group which uses a title of one kind and dilutes that title with membership not qualified to bear that title can have much strength in legislation, and certainly it would have a hard time to prove its case in court."

WAGE STABILIZATION ACT

Should Include Reference to Engineers

As Well As Lawyers and Doctors

In a communication to Secretary Larson, George Bechtel of New York stresses the desirability for effort to have engineers included in any future legislation relevant to the extension of the Wage Stabilization Act.

The communication referred to is noted below:

Mr. Edward Larson, Executive Secretary, May 15, 1944
National Society of Professional Engineers.

Dear Sir:

I should like to suggest that, with the expiration of the present Wage Stabilization Act on June 30th next, the Professional Engineers have an excellent opportunity to free themselves from the discrimination which the Treasury Department has applied to them, and dares not apply to the legal or medical profession. Lawyers and doctors are exempted from the Salary Stabilization provisions of the Treasury Department under paragraph 1002-5, copy of which is attached.

Why should not the Engineers be granted the same exemption from Salary Stabilization? I would propose that the act itself be amended when it comes up for re-enactment on June 30th to include Engineers who hold licenses to practice. The sense of this amendment to be as follows:

> "This Act shall not apply in the case of an employee who is the holder of a valid license or certificate permitting the practice of law, medicine *or engineering* or any of their branches and who is actually engaged in the practice thereof."

This is our last and only opportunity to get relief from the Treasury Department's narrowly restrictive and crippling regulations of salaries dated April 3rd, copy attached. Our most direct approach is to Congress now that the new Act is up for consideration.

The new Treasury Dept. regulations seem to me to be aimed at the Engineers particularly because their regulations have singled out this one profession as an example of how the 3% limitation acts on their so-called classifications or groups of like jobs.

I am writing you at the instance of Mr. George Nicastro to whose attention I first brought the matter, and am enclosing copies of my letters of the 10th and 12th to him, and also copies of the Treasury Dept.'s regulations referred to therein.

Very truly yours,
George M. Bechtel,

Excerpts From Regulation of Treasury Department

SALARY STABILIZATION

SALARY RATE SCHEDULE

Regional Officers, Salary Stabilization Unit, and Other Officers and Employees of the Bureau of Internal Revenue, and Others Concerned:

1. Section 1002.14 of the Salary Stabilization Regulations (Treasury Decision 5295) sets forth the conditions under which certain salary adjustments may be made in accordance with a salary policy or salary rate schedule in effect on October 3, 1942, or approved thereafter by the Commissioner.
2. This mimeograph is issued as a guide to employers who desire to make use of Section 1002.14 of the Regulations.

Illustration.

12. The following illustration is furnished as a guide to employers to show how salary rate ranges having less than ten employees may be grouped and included in the schedule.

EXAMPLE

No. employees	*Job classification*	*Rate range*
50	Assistant foremen	$200 - $275
25	Foremen	275 - 375
5	Mechanical engineers	300 - 400
4	Chemical engineers	275 - 380
6	Research engineers	325 - 425

In the above example, the assistant foremen and foremen must be included in their separate salary rate ranges. All the engineers may be grouped in one rate range with an overall spread of $275 to $425. The mid-point of this range is $350.

Fragments from

STATE & SOCIETY ACTIVITIES

GEORGIA

Newest Member of N.S.P.E.

The Georgia Society of Professional Engineers which received its charter as a member organization of the National Society on April 13th is now functioning in accordance with its Constitution and By-Laws through the medium of its recently chosen Officers and Directors. Following are excerpts from the above noted instruments.

Constitution

Preamble

Recognizing that service to Society, to State, and to Profession is the premise upon which individual opportunity must be built, the Georgia Society of Professional Engineers does hereby dedicate itself to the promotion and protection of the Profession of Engineering as a social and economic influence vital to the affairs of men and of the community.

Article I — Name

Section 1. The name of this Society shall be "Georgia Society of Professional Engineers", hereinafter called the Society.

Section 2. This Society shall be incorporated as a non-profit educational organization under the laws of the State of Georgia.

Section 3. This Society shall be a member state society of a national association of state societies of Professional Engineers having objectives in substantial agreement with those of this Society.

Article II — Objects

Section 1. The objects of the Society shall be the advancement of the public welfare and the professional, social, and economic interests of the Professional Engineer by promotion of education, legislation, and public relations through the establishment and maintenance of high ethical standards and practices.

Article IV — Dues

Section 1. The dues of the Society shall be determined by the Board of Direction and be indicated in the By-Laws. The admission fee shall not exceed five dollars. The annual dues shall not be less than five dollars nor more than twenty dollars, which shall include dues to a national association of state societies of Professional Engineers.

Section 2. The fiscal year of the Society shall be the calendar year.

Article V — Administration

Section 1. Board of Direction. The Society shall be administered by a Board of Direction, hereinafter referred to as the Board, which shall consist of the latest living Past President and the elective Officers and Directors enumerated hereafter. A majority of the Board members shall constitute a quorum. An affirmative vote of a majority of the Board members present at any regular or duly called meeting shall be required to pass any motion not inconsistent with other provisions of this Constitution.

Section 2. Officers. The Society shall have as elective officers a President, a First Vice-President, a Second Vice-President, a Secretary, and a Treasurer, who shall be elected annually. Neither the President nor a Vice-President may succeed himself. The Board may appoint an Executive Secretary who will serve until removed or released by action of the Board. The Executive Secretary shall not be a member of the Board.

Section 3. Directors. The Society shall have not less than four nor more than ten Directors who shall be elected for a term of two years. One-half of the number of Directors shall be elected annually.

Section 4. National Representatives. The Society shall be represented on the Board of Directors of the national association of state societies of Professional Engineers by one or more National Representatives, the number to be in accord with the constitutional provisions of the national association. The National Representative and one Alternate Representative shall be elected annually. No National Representative may serve for more than three successive terms.

Article VII — Headquarters

Section 1. Headquarters of this Society shall be in the City of Atlanta, Georgia.

Article XI — Sectional Groups

Section 1. The Board may authorize a sectional group in any county or group of counties of the State, provided evidence is given that there is a sufficient number of member Professional Engineers residing in the area. There must be at least ten such Engineers to form such a sectional group. All members of each sectional group must also be members of this Society.

Section 2. The Board shall have authority to make rules and regulations for authorizing, combining, or dissolving chapters.

Section 3. Each sectional group authorized by this Society shall adopt such By-Laws for its operation as it may deem proper; provided, however, that nothing contained therein shall conflict with or contravene the By-Laws of this Society.

Section 4. Sectional groups shall only engage in such activities as are consistent with professional ideals and ethics. Such activities shall be restricted to the county or counties for which the group is organized, except as the Board may in other respects authorize.

Section 5. In all matters of local concerns, not covered by this Constitution and By-Laws, sectional groups shall retain full autonomy, but may call upon this Society for advice, counsel, and assistance.

By-Laws

Article I — National Affiliation

Section 1. This Society shall become affiliated with the National Society of Professional Engineers.

Article II — Dues

Section 1. Dues for members shall be Ten Dollars ($10.00) per year. Members elected after February 15 of any fiscal year shall pay dues for the unexpired portion of the year as follows:

If elected between February 1 and May 15 ..... $7.50
If elected between May 16 and August 15 ..... 5.00
If elected between August 16 and November 15 ..... 2.50

Members elected after November 15 shall pay dues upon receipt of bills dated the beginning of each fiscal year.

Section 3. The admission fee to accompany an application for membership shall be Three Dollars ($3.00).

Section 4. The Treasurer of the Society shall transmit the current dues of Four Dollars ($4.00) for each member to the National Society for Professional Engineers at the end of the month during which the member's annual dues were paid to the Society, or a proportionate amount for each new member. Dues transmitted to the National Society shall include the cost of the subscription to the "American Engineer".

Article IV — Directors

Section 1. There shall be six directors elected to the Board of Directors. Initially two (2) shall be elected for a term of

GEORGIA SOCIETY OFFICERS FOR 1944 PROF. ENGRS.

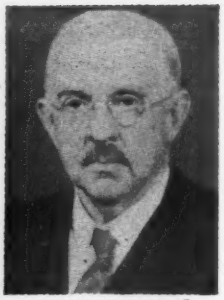
A. G. STANFORD
President

STEPHEN C. HALE
1st Vice-President

THOMAS S. SLOAN
2nd Vice-President

R. L. SWEIGERT
Secretary

JOHN A. DODD
Treasurer



ROY S. KING
National Representative

two years, and two (2) for a term of one year.

Article VIII — Committees

Section 1. The following standing committees shall be appointed:

1. Education
2. Public Relations
3. Membership
4. Program
5. Legislature
6. Ethics and Practice

ILLINOIS

Chicago Chapter Notes

The Illinois Engineer contains the following news of the annual meeting of the Chicago Chapter:

The second annual meeting, Chicago Chapter, Illinois Society of Engineers, was held in the club rooms of the Greater Chicago Moose Lodge, 130 North Wells Street, Chicago, April 17, 1944. President Bowlby announced that he had appointed a nominating committee, comprising J. A. Moore, James Fucik and Wayne Wallace, to propose a slate of officers for the coming year. Chairman Moore then read the following nominations: For chapter president, Leo M. Spurling; for vice-president, Fred D. Ellis; for secretary-treasurer, C. R. Ege. As the chapter representative holds over for another year, no nomination at this time was necessary. Following the report of the committee, it was moved and seconded that the nominees be declared elected as no other nominations were offered from the floor."

President-elect Spurling addressed the meeting, expressing the thanks of the group to President Bowlby for his fine activity as chapter president during the year 1943-44. Mr. Spurling reviewed the situation created by litigation over the Engineers' Licensing Act and brought the information of the members up to date on this important subject.

Mr. Bowlby then introduced Lieutenant Ela, U. S. Navy, who has been in active service from the Aleutians to the Solomons during the past four years. Lieutenant Ela gave a very interesting information account of the various naval actions in the Pacific, at most of which he has been a participant, and wound up his remarks with the expression of personal conviction that the tempo of events in the Pacific will soon be materially stepped up and that he expects at least most of the news from that theatre of war to be highly satisfactory to Americans.

Through the courtesy of Fred D. Ellis and Wayne Wallace, the remainder of the program consisted of two very fine color sound films, the first pertaining to travel, industry and archaeology in Yucatan; the other film illustrating the activities of the Mooseheart Home for children of members of the Loyal Order of Moose.

INDIANA

Appoints Committees

President Witt W. Hadley has announced the appointment of the following special committees:

Legislative Committee—M. W. Cameron, Auto License Div., State House, Indianapolis; M. G. Johnson, 1100 Burdsal Pkway., Indpls.; Arthur W. Burkle, County Surveyor, Court House, Lafayette, Ind.; H. Lester Janney, City Hall, Muncie, Ind.; Clyde E. Williams, City Hall, South Bend, Ind.; Lawrence M. Condrey, 611 Merchants Bk. Bldg., Indpls., Ind., and Russell C. Williams, 300 Harned Ave., Washington, Ind.

Collective Bargaining Committee—Dan E. Pierce, Chairman, 5726 University Ave., Indpls., Ind.; Ralph E. Simpson, 237 Blue Ridge Rd., Indpls., Ind.; Martin L. Anderson, Indiana State Highway, Indpls., Ind.; Claris Allen, 1246 E. River Heights Dr., Indpls., Ind.; J. Leonard Montgomery, 1917 N. La Salle St., Indpls., Ind.; Prof. Clarence C. Knipmeyer, Rose Pdy. Institute, Indpls., Ind.; and Prof. Ralph B. Wiley, Purdue University, W. Lafayette, Ind.

Have You Asked An Engineer?

Have you ever given an application to or asked one of the several hundred registered professional engineers in Indiana who do not belong to the Indiana Society of Professional Engineers to become a member? If you haven't, now is the time to start. Is the engineer working next to you a member? Have you ever thought to discuss it with him? Acquaint yourself with the activities of the Indiana Society of Professional Engineers, and call them to the attention of non-member engineers. Let's make the most of our opportunities. There is no time like the presnt.

MINNESOTA

Would Amend Law

In a printed brief the Minnesota Association summarizes the proposed amendments which have been agreed to by various engineering and architectural organizations. The brief follows:

Amendments To The Registration Law As Adopted By The Minnesota Association of Professional Engineers At Its 1944 Annual Convention

"The architectural, engineering and land surveying professions are responsible to the general public for the technical work based on their professional practice and represent an increasingly more important factor in the progress of civilization and the welfare of the community. A study by the members of these professions in this state of how they might better serve this responsibility to the general welfare and safety of the public soon focused attention on the fact that, if the public is to be assured a better professional technical service, it must be protected from the practice of architectural, engineering and land surveying professions by incompetent or inadequately trained individuals.

The only practical means for measuring this professional competence has been through a state registration law wherein the training, experience, ethics and abilities of an individual are reviewed by a State Board of Registration and, if acceptable, the registering of this individual under the state law so that all the public may then know that the individual is properly qualified and licensed to practice his profession. Our study soon revealed that the State Board of Registration was limited in its effectiveness by certain conditions of the registration law. We also were embarrassed to find that many other states refused reciprocal registration of professional architects, engineers and land surveyors with Minnesota because they did not consider the present standards of our registration law equal to the requirements of these respective states. We further found that there was no provision for the taking care of graduates or recognized courses of architectural and engineering instruction until such time as they had an opportunity to acquire sufficient experience to qualify them for registration and license to practice these professions. This left the group of younger architects and engineers without a definite status under the law.

We are convinced that the only designation that the public can recognize and rely upon when seeking a professional service must be a legal one, and registration under our state laws provides this. The raising of the standards of the practice of professional architecture, engineering and land surveying, however, becomes a matter of minimum requirements of training, experience, and ethics. To this end the position of the State Board of Examiners in regard to applicants for registration can be strengthened only by the conditions of the law and by the assistance of professional groups within the state that will then assist them in the policing of this practice.

We cannot obtain, as professions, the respect of the general public that we feel we are entitled to until such time as our professional services to the general public are of the necessary high order to merit this respect. It is upon this premise that we have concluded that the following amendments to our State Registration Law for professional architects, engineers and land surveyors are indispensable if we are to carry out our proper responsibilities to society.

In addition to the Minnesota Association of Professional Engineers the following organizations were represented on the committee preparing these amendments: Minnesota Chapter of the American Institute of Architects; St. Paul Chapter of the American Institute of Architects; Minnesota Association of Architects; Associated General Contractors of Minnesota; Engineers Society of St. Paul; Engineers Club of Minneapolis."

The Board of Directors of the Minnesota Federation of Engineering Societies approved these amendments at its meeting of April 15, 1944. Following is a Section by Section review of the amendments.

Sec. I. This section has been shortened and reworded to apply to the practice of architecture, professional engineering and land surveying rather than to practice as an architect, engineer or land surveyor. This is in keeping with the title of the act. The innocent but troublesome phrase 'in responsible charge' has been eliminated. At present more evasions of the intent of the law are based on these three words than on any other feature of the act. The work exempted is more clearly set forth.

Sec. II. This section applies to public work and similar changes have been made to make it apply to the practice of architecture, professional engineering and to eliminate 'in responsible charge.' A definition of public work has been added. All engineering, architectural and land surveying work in connection with public work must be done by registered men except work done by an elected official in the discharge of the duties of his office.

Sec. III. There has been a strengthening of the requirements for registration. An increase in the number of years of experience required from five to eight years, each of the years of university attendance or teaching being equivalent to a year of practice, provided however, the Board may require by rule actual experience of not less than three years of a standard satisfactory to the Board in addition to school attendance or teaching. This is substantially the way that the present law has actually been administered.

These changes are also recommended for the purpose of placing our law on a 'paper' par with the laws of other states for the purpose of reciprocal registration. The Board's power to examine any applicant is clarified. The Engineer (and Architect) in Training addition to this section will make it possible for a candidate for registration to take an examination in the basic sciences before acquiring the experience necessary for registration. This will give the pre-professional man a legal status and create professional consciousness.

Sec. IV. The change proposed here gives the Board power to suspend as well as revoke a certificate and provides a penalty for "farming out" of a seal or signature.

Sec. V. Permits the optional use of a seal but requires signature on all plans, etc., that this law requires be prepared by a registered person.

Sec. VI. Violation of the present law has been named as a misdemeanor. It is proposed that this be deemed a gross misdemeanor so that the case may be heard before the district court instead of a local court.

Sec. VII. Permits corporations now organized for the purpose to continue to practice architecture, professional engineering and land surveying but prohibits the forming of new corporations for such purpose.

Sec. VIII. One word, "and" added to this one.

Sec. IX. Provides that the amendments shall take effect immediately after the passage of the act."

Issues News Letter

The May number of the Minnesota Association of Professional Engineers contains the following:

"An important enclosure comes with this News Letter. It gives you the data on the proposed amendments to the State Registration Act which will be proposed for action at the next session of the legislature. Every engineer has a personal stake in the passage of these amendments, and every engineer must assume responsibility for seeing that they are clearly understood by those concerned. If these amendments are to be passed, it is necessary that a great amount of personal contact work be done. We musst be able to answer all questions intelligently to clear up misinformation and lack of information. We must familiarize our State Senators and Representatives with the facts. Keep this enclosure handy and make use of it!"

Publications Forthcoming

"The Press Publicity, Editing and Publishing Committee has two publications in the hands of the printers. One is a booklet on fees and schedules which will be made available to all employers, public officials and other interested individuals or organizations. We feel that the fee schedule should be distributed widely to employers to serve them as a guide in their planning.

"The second publication is a handbook of the By-Laws of the

State and District organizations. We want every member, new and old, to have a copy. We feel that presentation of this handbook to new members at the time of their acceptance into the district Societies will help to give an air of formality to the occasion."

Chapter Notes

"District No. 1

"Walter H. Wheeler, national director of the NSPE, attended the meeting of District No. 1 at the Carlton Hotel in Rochester. He discussed professional engineering activities at the national level, the American Society of Civil Engineers on collective bargaining, and the Wages and Hours Law. President Stolte discussed the amendment changes before the meeting, which was attended by seventeen members. James F. Enz presided. G. J. Sullivan and A. C. Leonard reported for the committee studying the use of professional engineers in state government. It was suggested that Mr. Stolte consider the findings and also the possible appointment of a state committee to carry on such work."

"District No. 2

"A record crowd turned out for the April 27th meeting of District No. 2 at the Saulpaugh Hotel in Mankato, where President Stolte spoke. A total of 28 out of the membership of 40 attended the dinner meeting.

Most of those absent are in the armed forces, so the attendance hit a new high. Perhaps President Floyd Minium's ultimatum had something to do with it. He had notified members that only a mortician's certificate of burial would be accepted as a legitimate excuse for absence. Mr. Minium has set up a working plan for committee assignments, and for handling of the legislative program there. A chairman will function in each county and will give senators and representatives full information about the proposed law changes."

"District No. 4

"Some 30 persons attended the District No. 4 meeting at the St. Paul Hotel in St. Paul April 21st. William G. Klett presided. Discussion centered around the registration law changes and was led by Harold Chard, state chairman of the Legislative Committee."

"District No. 5

"Membership was the chief topic at the District No. 5 meeting April 28th at the YMCA in Minneapolis. Cliff Brandt, district membership committee chairman, led the discussion. C. K. Preus presided at the meeting, which was attended by twenty members. Marking the start of the enlistment of new members in private industry, Paul Dahl of Minneapolis Honeywell reported he had 25 engineers at that plant ready to apply for registration. He reported there were four or five times that many ready to apply in the Honeywell plant alone."

Architect-in-Training

Minnesota Institutes Proposal

Indicative of the trend with reference to the Engineer-in-Training is the proposal to include Architects-in-Training in the recommended Minnesota Act. Following is the section pertaining thereto.

"The Board shall issue to each applicant upon successfully passing an examination in fundamental architectural or engineering subjects a certificate stating that he has passed such examination and that his name has been recorded as an Architect-in-Training or Engineer-in-Training. The term Architect-in-Training or the term Engineer-in-Training as used in this Act, shall mean a candidate for registration as an architect or professional engineer who is a graduate of a school or college approved by the board as of satisfactory standing; or who has had four years or more of experience in architectural or engineering work of a character satisfactory to the board; and who, in addition, has successfully passed an examination in the fundamental architectural or engineering subjects prior to completion of the requisite years of experience in architectural or engineering work; and who shall have received from the board a certificate stating that he has successfully passed this portion of the professional examinations."

National Registration

The Bulletin of the Minnesota Federation of Engineering Societies contains the following informative note:

National Engineering Registration Activities

Unless a Minnesota engineer has occasion to do work outside of the State, he perhaps knows very little about the activities of the National Council of State Boards of Engineering Examiners. The National Council is a clearing house for all of the State and Territorial Boards which belong to it. It was originally formed on November 8, 1920, with a membership of relatively few Boards. Minnesota was one of the original members of the Council, and Col. Paul Doty, for many years president of the Minnesota Registration Board of Architects, Engineers and Land Surveyors, was one of its early presidents. Last fall at the Indianapolis meeting, distinguished service certificates were awarded to both Mr. F. W. McKellip and Mr. M. E. Chamberlin of the Minnesota Board for service of twenty years or more as members of the State Board of Engineering Registration, Mr. Chamberlin being present to receive the award. Mr. George M. Shepard of the Minnesota Board, is a director of the National Council for the central zone and is chairman of its legal procedure committee. He was recently appointed to a four-year term as a member of the A.S.C.E. national standing committee on registration.

The membership of the Council now consists of 49 regularly constituted Boards of Registration for professional engineers, including 46 states and the territories of Puerto Rico, Hawaii, and Alaska, these Member Boards reporting a total of over 72,000 registrants in good standing. The only states which do not have laws governing the practice of professional engineering are Montana and New Hampshire. The National Council is an advisory and co-ordinating agency established primarily to assist State Boards of Registration.

Any registered engineer may have the National Bureau of Engineering Registration which is operated as a function of the Council, investigate, verify, and evaluate his professional record. An engineer registered in Minnesota can, upon meeting the requirements of the Bureau, secure copies of his certified professional record, certificate of qualification and certificate of reciprocal indorsement, combined in one document, which may be submitted with the application for reciprocal registration in other states.

During the past two years, the National Council has collaborated with the Lewis Historical Publishing Company in compiling and publishing a complete United States directory of registered professional engineers. This publication represents several years of planning and efforts by officers and committees of the Council and has been made available for distribution within the past few months without cost to the Council. A copy is on file in the State Office of the Minnesota Board at 315 New York Building and may be inspected by anyone desiring to do so. The publication is for sale by the Lewis Historical Publishing Company, Inc., 8th Avenue and 14th Street, New York 11, N. Y., at $15.00 per copy, and as the revenue of the Council is directly benefited by the sales of this publication, it has requested that publicity be given to the directory with the hope that sufficient interest will be shown by professional engineers to make it a biennial publication.

The work of the Council is supported by membership fees paid by the Member Boards. Due to the difficulty in many states in securing appropriations from state budget boards for general activities of this nature, the contributions from the different states have varied greatly and do not bear a direct relationship to the number of registrants represented. As an example, the Alaska Board with only 53 registrants pays $50.00 as a membership fee, while Colorado and Michigan with over 3,000 registrants in each state pay the same amount. Minnesota with 1,700 pays $100.00. Two of the national engineering societies contribute as follows: The American Society of Civil Engineers $500.00 annually, and the National Society of Professional Engineers $200.00 annually, for the support of the Council activities. The total amount available at the present time is approximately $6,000.00 annually. This enables the employment of a part-time executive secretary, together with a full-time office secretary at

its office in Columbia, South Carolina, and also enables the cost of the annual report and miscellaneous expenses to be defrayed. The work of the executive secretary, Mr. T. Keith Legare, who has held this position for a number of years, even though on a part-time basis, is being accomplished with exceptional efficiency. While this note as to the activities of the National Council was not prepared for the purpose of soliciting more funds, there is no question that more effective work could be done if additional funds were provided. The foregoing statement gives Minnesota engineers a picture of what their own Board is doing toward improving the engineering profession by maintaining proper standards for registration. All qualified engineers should identify themselves with their profession by applying for registration.

NEW JERSEY

Board Meeting Abstracts

From Secretary Braun's report, the following have been abstracted:

The Board of Trustees met with the Mercer Chapter in Trenton, N. J. on April 14, 1944. The occasion was the first anniversary of Mercer Chapter. Mercer observed this occasion by sending in a generous list of new members.

President Channing P. Clapp of the newly formed Raritan Valley Chapter reported on the success attending their efforts to reorganize the old Middlesex Chapter. The name of the new group indicates its larger sphere of influence. The interest shown to date indicates an aggressive Chapter of 50 members at least. State Membership Chairman Daily has helped immeasurably in organizing this newest Chapter group.

Our Union County group will hold a meeting within the month from which a favorable report is expected to emanate.

The Legislative Committee is carefully studying all legislation offered at Trenton to see how it affects the status of the registered professional engineer in New Jersey. The perennial 'Lawyers Bill' is again being opposed by us.

The Post War Planning Committee is striving to inaugurate projects in each Chapter area which will prove of benefit to the engineer as well as the community. This Committee has reprinted a booklet which gives a concise picture of Post War Planning as it applies to the engineering profession in New Jersey. Since the New Jersey Legislature has recently set up a Bureau for Economic Development our Post War Planning Committee has an added responsibility to submit proposals on planning to this new agency for consideration. President Krueger was directed to appoint a Building Code Revision Committee consisting of representatives from each Chapter to cooperate with the Building Contractors Association and other professional groups to bring building codes in New Jersey up to date. This Committee was empowered to submit its recommendations for revising these codes to the Bureau of Economic Development as a major project.

Public Relations Chairman Matte outlined a "5" Point Program of action:

1. *To secure press releases and articles for technical journals.*
2. *Devising means to obtain recognition of our Society as an important and influential body by various units, civic groups and the public.*
3. *Conduct educational programs in schools covering city planning, etc. with subsequent competitions on that subject sponsored by the local Chapters.*
4. *Sponsoring radio broadcasts on popular subjects by the Society.*
5. *Organize a speakers' bureau to provide speakers for special occasions or as indicated by circumstances.*

Engr. Warov read the Salary and Fees Committee report in the absence of Chairman Hehn. A considerable discussion period ensued and it was determined to continue deliberations with the newly appointed NJ Civil Service Commission with the adoption of the current Salary Schedule and classifications as the major objectives.

Arrangements for holding a semi-annual meeting of the Society in June, 1944 were left to the Board of Trustees. Five topics were suggested for discussion at this meeting: 1) Standard Symbols; 2) Soils Mechanics; 3) Building Codes Revisions; 4) Civil Service Classifications; 5) Economic Status of the Engineer.

A letter from our State Registration Board reciting its difficulty in securing both business and residence addresses from each registrant for use in the Roster as suggested recently was ordered received and filed.

It was announced that Vice President Kissam of Princeton University has been granted leave of absence to do some research work in the South Pacific and will, consequently be unable to actively participate in the affairs of the Society "for some months to come". The Secretary was directed to send a congratulatory letter to "Phil" and to send him abstracts of the meetings from time to time.

A pamphlet on Ethics and Professional Practice prepared by the Technical Advisory Bureau of the WPB was referred to our Ethics and Professional Practice Committee."

Chapter Notes or Activities

Essex Chapter recently held its Annual Ladies Night at the Glen Ridge Country Club. About 150 Engineers and their Ladies attended. Engr. E. L. Francisco was the guest of honor. President Jones and Entertainment Chairman Dean staged a most enjoyable evening for us. Visitors from surrounding Chapters were presented to the group and speech making was held to a bare minimum. A well-balanced entertainment program climaxed a grand affair.

South Jersey Chapter members were recently privileged to visit the dehydration plant of the P. J. Ritter Company in Bridgeton to see for themselves how foods are processed during wartime so that they can more effectively fight for Freedom. The Annual Shad Dinner of the South Jersey Chapter has been scheduled for May 20, 1944. This affair will be bigger and better than ever. Impromptu golf matches have been arranged as a stimulus to jaded appetites. All of our Society members and their friends are invited to attend.

The members of the Hudson Chapter heard Engineers A. J. Cooper and William Devers of the Allis-Chalmers Mfg. Co. address them on the "Majesty of Steam". You can bet that the May meeting of Hudson will be equally outstanding. Hudson is actively pursuing its 1944 membership quota. Twenty-five new members have been announced to date and many more are expected. These Hudson boys have an uncanny knack of pulling a rabbit out of a hat when it comes to attaining their objectives. Then too, President Clarke is unique in his ability to draw out the best efforts of his loyal members. Hudson seems determined to wrest the membership toga from the Essex Chapter.

Monmouth Ocean Chapter is determined to carry on the aims and ideals of its late President George Randolph as its inspiration. President Buck and Secretary McKee have announced a fine program for 1944. Interest is increasing at the monthly meetings and the Chapter is far advanced on its membership and advertising campaigns.

Mercer Chapter reports a membership of 35 to date. Although just a year old, Mercer has made great strides in its influence in Trenton and Mercer County. I wonder if it could be the leadership of President Leake, Secretary King and the other officers that is causing this fruitful Chapter to blossom forth in a region just recently considered quite barren ground? We are advised that a copy of the US Directory of Registered Professional Engineers is now on file in the Trenton Library. Thus Mercer proves itself to be "par oneri". (Latin for equal to the burden).

Passaic Chapter, too reports an upsurge in activity. Despite a number of members who are busy at the war fronts serving Uncle Sam, Passaic is doing a grand job on membership. The prowess of its bowling team is gaining added recognition for the Chapter. President Briggs and Secretary Reuter, are guiding the destinies of Passaic with the full support of an aggressively capable membership. When in the Paterson area on any fourth Thursday, just come to 204 Paterson Street for a meeting of more than usual interest.

NEW YORK

17th Annual Convention

The New York State Society held its 1944 annual meeting at the Hotel Commodore, New York, on May 5th and 6th. Delegates from all chapters were present.

Some 500 persons attended the smoker which followed the meeting and dinner of the officers and directors held on Friday. The general meeting which was held on Saturday was divided into morning and afternoon sessions with a luncheon between 12:30 and 3:00 P.M. The said luncheon was addressed by the Hon. Lawrence A. Appley, Executive Director of the War Manpower Commission and President Harry E. Nold of the National Society of Professional Engineers. Vice President Frederick H. Zurmuhlen of N.S.P.E. was toastmaster. A reception preceded the luncheon.

A topic of more than usual discussion was the loss of first place in the Roster of State Societies to Ohio. If expressed determination is indicative of results, New York will regain its laurels, despite the intimation of N.S.P.E. President Nold that Ohio was also determined as were several other states which coveted second place.

The subjects of Fees and Salaries and Engineers-in-Training produced interesting discussions. A representative of the first Engineers-in-Training accredited by New York advised of the conditions attendant upon present attempts at organization and asked the State Society to continue as a spokesman until the junior society could be organized.

Among the resolutions adopted were:

1) *A proposal to make the granting of licenses a formal ceremony at which time an appropriate oath could be administered to new licensees.*

2) *A proposal to seek collaboration with other professions, such as law, medicine, dentistry, in matters of legislation and public interest.*

3) *A proposal to develop an American Engineer Corps commanded by an Engineer-General comparable to the Surgeon-General of the Medical Corps and to place professional engineers in military capacities where their training and experience could be most effectively used.*

A proposal to increase Society dues was lost by a vote of 419 in favor as against 290; a two-thirds approval being required.

The convention was honored by visits from a number of members presently in the armed services of the nation. Among such were: Lt. Col. Hubert Snyder, Major Frank Laverty, Commander Arthur Benline, Lt. Joseph Diamond and other former officers of the Society or its chapters.

Following are the officers, directors and members of the Nominating Committee chosen for the ensuing year: Clarence W. Post, President; Charles W. Burke, 1st Vice President; William H. Larkin, 2nd Vice-President; Ernest F. Fox, Financial Secretary; Patrick M. Corry, Treasurer; Directors-at-Large, Zone No. 1, James F. Fouhy, Zone No. 2, Martin Nelson, Zone No. 3, Solon E. Friedeberg. Members of the Nominating Committee, Newell L. Freeman, George T. Macbeth, William W. Perry, J. Leo Scanlon, Frederick H. Zurmuhlen.

License Examinations

In the February 1944 examinations for Professional Engineers in New York State, the results of which were recently announced, out of 114 candidates, 56 passed, 35 were conditioned in one subject, and 22 failed.

In the concurrent examinations for Engineers-in-Training, out of 69 candidates, 40 passed and 29 failed. Consequently there are now 71 officially accredited Engineers-in-Training in New York State.

The comparison of the two groups by individual parts of the examination taken in common is as follows:

	Percent Passing	
	Prof. Engrs.	*Engrs.-in-Training*
Part I (Structural Design)	69%	67%
Part II (Engineering Sciences)	73	74
Part III (Professional Engineering)	66	—
Total	49%	58%

With almost identical results in the individual papers, the better percentage showing of the younger graduates is explained by the fact that they had to pass only two parts of the complete examination instead of three.

Bronx County Chapter

Submitted by President John H. Knight

"The Board of Directors held its meeting on May 4th. The regular membership meeting followed that of the Board.

Engineer Henry Wolfe was elected to the Board of Directors to fill the vacancy created by Engineer Joseph T. Houlihan's election to the Vice-Presidency.

The Economic Status Committee submitted a preliminary schedule of Fees and Salaries for the New York City area. A motion was carried to submit a copy of the schedule to the members for study. Engineer Arthur V. Sheridan recommended that the Chapter secure copies of the Ohio State Society schedule and consider it as a model form for Bronx County Chapter to use in connection with its own schedule. Upon motion the President was directed to secure copies of the Ohio State schedule to be sent to the membership together with its own preliminary schedule.

Engineer Samuel J. Kessler urged full cooperation of the Chapter members in connection with the Greater New York Fund Drive through the Engineers and Architects Group now active in that work.

Engineer William L. A. Arctander, Chairman of the Professional Conduct Committee very cleverly converted his report into a presentation of a brief case to Past President Solon E. Friedeberg as a token of appreciation for his services to the Chapter. He stressed the creditable manner in which Engineer Friedeberg devoted his time and energy to the office."

Rensselaer County

Appoints Committees

President A. G. Schubert has announced the following appointments: Ethics and Practice, Engineer Carl Robbins, Chairman, Engineer Burr M. Stark; Membership, Engineer Stanley Taylor, Chairman, Engineer William Harrison; Publicity, Fred C. Hill; Legislative, Engineer Frank Keis, Chairman, Engineer Gabriel Solomon.

In an address to the Chapter Captain Glenn Burrell of the U. S. Navy recently paid eloquent tribute to the Construction Battalions, commonly known as Seabees.

Westchester

Begins New Administration

With the following officers and directors installed the Chapter enters upon another year: President, James C. Harding; 1st Vice-President George T. Macbeth; 2nd Vice-President, Reeves Newsom; Secretary, Jackson H. Taylor; Treasurer, William H. Van Tassel; Directors, Joseph A. Brady and Chester A. Garfield.

President Harding has made the following appointments: Finance Committee, Harold W. Watt, Chairman, John Weyant, L. S. Waterbury; Ethics Committee, Wm. L. Wenzel, Chairman, John Edelstein, J. W. Ensign, R. M. Gates; Legislative Committee, Vincent G. Terenzio, Chairman, Louis Kuhn, J. S. Langthorne, Jr., A. S. Traub, Jr., Paul C. Krueger; Publicity Committee, Federick C. Brandes, Chairman, J. K. Ruether, Wm. Dobson; Membership Committee, C. B. Spates, Chairman, Paul I. Brienza, Ed. J. Martin, Jr., Reeves Newsom, Earle Griffen, Max Vogel, Frank Fowler, C. A. Garfield, F. I. McGrath.

Ben Krey has been appointed to the Westchester County Planning Board, which consists of nine members from various parts of the County. The duties of the Board whose members are unpaid, are to prepare plans for future County development particularly with respect to highways and zoning. It also exam-

ines and approves or disapproves all capital projects to be undertaken by County departments.

Reeves Newsom has been appointed Village Manager of Scarsdale to fill the vacancy caused by the death of the late Engineer Arthur Boniface. For a number of years Mr. Newsom was an active consulting engineer specializing in water supply and sewage disposal. He has been President of the New Rochelle Water Company and City Engineer of Lynn, Mass., and is a Past President of the American Water Works Association.

Arthur Beline still holds the spotlight. Some of the New York papers pictured him being welcomed back from Africa by Mayor LaGuardia. His battalion after a strenuous construction job in Italy, has returned to Camp Endicott, Davisville, R. I.

Posthumous Award Honors Service of Lt. Col. Morrison

Lieutenant Colonel Robert F. Morrison, Ordnance Department, was posthumously awarded the Legion of Merit, the War Department has announced.

The accompanying citation read as follows:

For: Exceptionally meritorious conduct in the performance of outstanding services. As Chief of the Artillery Branch of the New York Ordnance District from April 14, 1942, to the time of his death on October 16, 1943, he distinguished himself as an executive demonstrating a masterful handling of delicate and controversial situations. The sound judgment, leadership, careful planning, intense energy, tireless activity and devotion to duty which he exhibited in the accomplishment of his duties contributed materially to our war effort. His resourcefulness and initiative succeeded in solving many complex problems incident to the rapid expansion of District production.

Mrs. Miriam E. Morrison, his widow, resides at 32 Heathcote Road.

Lieutenant Colonel Morrison had been a second lieutenant in the first World War, and on active duty in the Army since August, 1941. He was in civil life president of the Hastings Pavement Company, and was on leave from that position in the armed services.

Lieutenant Colonel Morrison had lived in Scarsdale at the Heathcote Road address since 1936.

OHIO

From The Ohio Engineer

Following are items excerpted from the May issue:

President's May Letter

Fellow Engineers:

Healthy organizations show remarkable similarity in their curves of growth. Normally the organization starts to grow slowly; then the rate of growth increases and for a considerable period of time this increased rate continues; then the rate slows down and the organization finally reaches a relatively stable condition of slow growth and continuing prosperity.

The Ohio Society of Professional Engineers is now in its period of rapid growth. The increase in membership in 1943 was 35%. Increase in membership this year is running at almost the same rate. Every chapter and every member can help to keep us in this stage of rapid growth, until we reach the strong and relatively stable condition in which the organization can render maximum service to the public and the engineering profession in the State of Ohio.

The present opportunities for growth are very large. In professional societies, it is not unreasonable to expect membership up to at least 80% of the total members of the profession licensed to practice. The O.S.P.E. membership comprises less than 30% of the registered engineers in the State. Furthermore, increasing numbers of qualified engineers in Ohio are recognizing the advantages of professional status and are applying for registration. This means that the number of men eligible for membership in the Society is growing rapidly.

We have a good Membership Committee, headed by George Kerr — a hardworking, aggressive engineer. You will hear from him. Give him your support.

Chapter Presidents and Chapter Membership Chairmen can review their accomplishments of 1943 by looking over the comprehensive table on page 3 of the March issue of the Ohio Engineer. More important, they can see where they stand in 1944 by looking at the membership report contained in each issue of the Ohio Engineer.

My appreciation to all of you who are building up the Society membership. You are rendering valuable service to the Society."

Sincerely yours,
Tom Rolph

Board of Trustees

There was an unusual number of new faces present for the May 5 dinner meeting at the Virginia Hotel in Columbus.

The meeting started off as usual with Treasurer Shank's report, which showed our net financial assets at $7653.08.

The Committee reports began with Vice President Hale reporting as chairman of the Public Relations Committee. Engr. Hale read a letter he had sent to members of the committee. Sec. Lefeber of Cincinnati called attention to Post War Planning being a part of public relations. Pres. Rolph thereupon announced that Fred Swineford had accepted chairmanship of a Committee on Post War Planning. Membership Chairman Kerr reported the present membership at 2205 and an approximate increase of 50 each month this year. Engr. Kerr outlined several plans which he hopes will stimulate the membership drive.

For some time the discussion dealt with membership problems and suggestions. Smiley of Dayton, who is chairman of a Dayton committee on Registration, is trying to promote Registration of Engineers in Industry there. Chairman Hubbard of the Committee on Engineers in Industry hopes to have a brochure soon to help in the contacts for members among Engineers in Industry. Moellenkamp, president of North Central, stated that his chapter was making a survey of Engineers in Industry to promote Registration. Neff, president of Cleveland Chapter, stated that the Akron Chapter sent letters to industries promoting Registration of Engineers which was effective. Trustee Salsinger suggested a printing and wider distribution of the Registration Act. A motion to do this was carried. (Arrangements have since been made to do this in cooperation with the Registration Board.) Chairman Kennedy of the Violations Committee reported an average of one case per week. There will be reports as soon as any are found which can be printed in the Ohio Engineer. The 1943 and 1944 Trophy Committees' reports were accepted (See elsewhere in this issue).

Executive Secretary Chacey mentioned his trip to Chillicothe, the new directory, Southern Ohio's new publication, the Society's mailing list, transfers from other States, and other items of news given more fully in other articles of this issue.

President Weinland of Canton brought up the ever present question of Unions. Some Engineers in Industry fear that the O.S.P.E. is a glorified union. He was referred to the many statements of policy in the profession's publications, which are to the effect that the Society cannot act as a bargaining agent nor will it become a union, for that is incompatible with the essential attributes of a profession. President Neff asked whether Engineers were being approached by the unions and stated that he understood that some staffs were. It developed that some O.S.P.E. members have voluntarily joined unions.

Engineer Jamison pointed out some conflicts with Federal government rulings and our Fee and Salary recommendations. Engr. Neff stated that the Cleveland Chapter has set about to develop by survey a salary schedule for Engineers in Industry in the Cleveland area. He believes the Society should revise their schedules. No action was taken.

Chapter Activities *(copied)*

Canton — Secretary Sperow's card announcing their April 13th meeting was received. The meeting was announced as a dinner meeting with William J. Conley scheduled to speak on "How Welding Affects Design."

Central Ohio — C. H. Wells, publicity committeeman, sent us the fruits of his work, a seven inch newspaper column announcing the meeting and an eleven inch newspaper column telling about

the meeting itself. The meeting was that fascinating subject of "Electronics At Work," by W. B. Montague and H. C. Jenks of Westinghouse. With only 76 members in the Chapter they had 200 in attendance for a dinner meeting at Granville Inn. (Just try to beat that!)

Cleveland — The Cleveland Engineer had pictures and write-ups on its members who were in the Primary Election. The first open meeting of the society was held on March 30. After committee reports were given two pictures, "Limited Ways" and "Pennsylvania Turnpike" obtained by Jack Kennedy from the Portland Cement Association, were shown. The Chapter's constitution also was printed.

Franklin County — The Columbus Engineer announced a meeting in May to be sponsored by the Highway Section of the Chapter. The ballots for their June election were mailed and new members were announced.

Dayton — Their news-letter announcing the April meeting and other items of interest was received. Four new members were listed. This Chapter is making a special effort to get Engineers in the industries of their community registered and in the Society as indicated by the activity of Chairman Smiley of their Registration committee, and the announcement of their May meeting. N.S.P.E. President Nold will speak at that dinner meeting on "Registration of Engineers."

Hocking Valley — Twenty-three members and guests met in April at Nelsonville for a dinner meeting. Trustee Ogan gave his report; the by-laws were amended, and Engr. Robinson of the Hocking County Post War Planning Commission reported the activities of the Commission. Sound pictures of the Alaska Highway were shown.

Mahoning Valley — Secretary Stoll's minutes of the April 11th meeting gave the names of two new members and announced the May meeting. Dr. J. H. Herron of the Testing Laboratories of Cleveland gave an interesting talk on the history and development of tools. From his collection of some 10,000 Dr. Herron displayed several hundred items.

Marion — J. L. Zant, chairman of Public Relations for the Chapter, sent a lengthy report of their April meeting to the newspaper. Seven inches of column were printed in the local paper. The speaker was A. N. Anderson, sales engineer of the Detroit Diesel Engine Division of General Motors. His subject was "The Diesel Engine." The occasion was guest night and 50 members and guests attended the dinner meeting.

Maumee Valley — Secretary Sims tells in his minutes of their April dinner meeting about an Alaskan Highway program. Engr. Merlin Hughes, Trustee of S-O-S Chapter, who is with the Ohio Corrugated Culverts Company, introduced Engr. Spindler, who addressed the group on the Alaskan Highway and showed his beautiful colored slides.

North Central — Public Relations Committeeman Monnett reports that 85 members and guests were present to hear National President Nold speak on "Collective Bargaining As It Affects Professional Engineers," and National Director Kennedy speak on "Professional Ethics." Monnett reports that President Rolph will be the speaker at their next meeting.

Ohio Northern — Secretary Stultz sent in a four-inch newspaper clipping telling of their dinner meeting. The three films shown were "Asphaltic Concrete Pavements," "Life and Death of the Hornet" and "Operation of the Steam Turbine." Twenty-two members were present.

Southern Ohio — Secretary Barrett turned editor and published Vol. I, No. 1 of the Southern Ohio Engineer. The subjects treated in this issue were regular meeting dates (2nd Monday of each month), changes of address, Vol. I, No. 1, Membership, Chacey's Exhibit, Post War Planning Committees, and Membership by Counties."

Akron Chapter

Conducts Classes

From the Akron District Society comes the following:

"Classes will be conducted semi-weekly during April, May and June 1944 by The Akron District Society of Professional Engineers, for the benefit of any engineer or surveyor who is interested in registration and expects to take the examination given by the State Board at Columbus next July.

"These classes will be free and intended as a review for the examination. If interested please notify the Committee giving your name and address and branch of engineering in which you are interested.

"Further information will be furnished later as to time and place of these classes upon receipt of your request."

Committee

D. T. Blundell, 607 Chestnut Blvd., Cuyahoga Falls, Ohio;
D. G. Cackler, 1634 Brittain Road, Akron;
D. W. Converse, Chairman, 360 Litchfield Road, Akron, Ohio;

"State of Ohio
State Board of Registration For Professional Engineers and Surveyors
113 *Wyandotte Building*
Columbus 15

"D. W. Converse April 20th, 1944
12 *Exchange Street*
Akron, Ohio

Dear Engineer Converse:

"I was very much interested to receive the notice of the Akron Society of Professional Engineers relative to the classes being conducted for persons desiring to take the professional engineers examination. This is indeed a very creditable undertaking for the Akron District Society and I am sure it will be highly beneficial to those men who have not had the privilege of receiving college training.

"If we can be of any further help to you relative to this or any other matter of professional interest, we shall be very happy to be called upon."

Sincerely yours,
Walter W. Graf, Secretary

Three classes with an enrollment of 32 are now in progress of preparing candidates for the next examination.

OREGON

Schedules Examinations

The next examination for registration as Professional Engineer in the State of Oregon will take place on September 8th and 9th. Candidates who meet the eligibility qualifications must file applications not later than 30 days prior to the dates of the examination.

PENNSYLVANIA

News and Comments

The American Engineer is indebted to Executive Secretary Russell Conrad for the following items:

Engr. Warren H. Hinks, Secretary of the Johnstown Chapter, has been appointed by Governor Martin as the fifth member of the "State Registration Board for Professional Engineers" in the place of Andrew B. Creighton resigned.

The Tenth Annual Conference of Trustees of Colleges and Universities of the United States was recently held at Lafayette College at Easton. A post-war college considerably changed in character but capable of greater service to the Nation than ever before, was visualized by leaders in education, government, business, engineering and law.

It is estimated that it will cost about $1,000.00 to prepare and see a new Registration Act through the General Assembly. Do you have any suggestions on raising the money? It is better to spend $1,000.00 and accomplish our purpose than $500.00 and lose. (Too little too late.)

National President Harry E. Nold has appointed the following members of our Society to serve on National Society Committees: Samuel I. Sacks, Philadelphia, Budget and Finance Committee; Robert Hall Craig, Harrisburg, Fact-Finding on Collective Bargaining; Michael Baker, Jr., Pittsburgh, Federal Practices Affecting

the Engineering Profession; Hubert C. Eicher, Harrisburg, Educational Committee; E. A. Holbrook, Pittsburgh, Advisory Committee; Raymond M. Fuller, Philadelphia, Chapter Activities; Herbert R. Moffitt, Harrisburg, Constitution and By-Laws; J. J. Paine, Pittsburgh, (Chairman) Public Relations; Earl S. Fenelon, Pittsburgh, Patents; L. E. Moody, Philadelphia, Professional Relations.

Harrisburg Chapter

From the May issue of Sparks comes the word that "We are endeavoring to economize with the cost of publishing and distributing 'Sparks'. It is now being printed using both sides of the paper and will be mailed second-class to members residing in Harrisburg and immediate vicinity. Members living beyond these limits will continue to receive their copy by first-class mail.

Pittsburgh Chapter

The Pittsburgh Engineer lists the two new members, Walter F. Adams, 2616 Voelkel Ave., Dormont, Pa., Roy W. Purchase, Apt. 13, 370 Highland Ave., Pittsburgh, Pa., and the following new registrants residing within the Chapter area:

Adams, Walter F. 2616 Voelkel Ave., Dormont
Barry, T. J.—Park Bldg., Pittsburgh
Brand, Charles M.—West Penn Power Co., P.O. Box 1736, Pittsburgh
Carden, Charles S.—18 Sheridan Ave., Bellevue
Cozza, Michael Richard—2125 Walton Ave., Pittsburgh
Donaldson, Robert R.—323 Fourth Ave., Pittsburgh
Eben, Christian F., Jr.—11 Clyff Land, P.O. Box 19, Beaver
Feinberg, Abraham—1936 Nablestown Rd., Pittsburgh
Fertig, Marcel M.—712 Princeton Blvd., Pittsburgh
Gale, Charles W.—Surface Combustion Co., 601 Grant Bldg. Pittsburgh
Grapp, Edward H.—1306 Methyl Street, Pittsburgh
Johnson, Fred H.—532 Lansdale Place, Pittsburgh
Maloy, John S.—14 Wood Street, Pittsburgh
Mielke, Carl E.—235 Princeton Ave., Pittsburgh
Miller, Wesley A.—5701 Elwood Street, Pittsburgh
Orefice, Arden D. L.—121 Overbrook Blvd., Pittsburgh
Prowse, Robert J.—1265 Wisconsin Ave., Pittsburgh
Schweinberg, Norman H.—1203 Swissvale Ave., Wilkinsburg
Simpson, Richard L.—11 Chartiers Place, Pittsburgh
Skinner, Dean C.—153 Lloyd Ave., Pittsburgh
Stefansky, Richard—4842 Ellsworth Ave., Pittsburgh
Stock, Robert F.—82 Fordham Ave., Pittsburgh
Sutton, Roy R.—144 Wood Street, Pittsburgh
Walton, Joseph E.—American Bridge Co., 1619 Frick Bldg., Pittsburgh

The Pittsburgh Engineer states: "The National Labor Relations Act was passed with a view of reducing strikes we are told, therefore since strikes were not a condition present in the relation between Engineers and their employers, it is likely that engineers as employees were not even thought of as being affected by the Act when it was passed. It appears the act can be used in the case of the Engineer employees, but in fact much depends on the individual engineer. If he desires this sort of organization he may have it; if he believes he can ignore the whole thing, and still be untouched by it he is wrong; if he wants some other method, but thinks he will wait and let others bring forth something he is almost sure to be disappointed; but if he wants another method he can have it if he will join with others and work for it. This Society is for those who want to work for the things that make Engineering a Profession economically and morally independent and responsible.

"The New York State Society of Professional Engineers has approached this issue or more properly I should say proposed a solution and proceeded to carry the solution into effect by organizing a separate State Society for Engineers-in-Training, sponsored and guided by the New York State Society of Professional Engineers. The National Society of Professional Engineers Board of Directors at their recent meeting have set up an 'Economic Policy of the N.S.P.E.', and one of the plans is this platform as it appears in the March number of the American Engineer recommends that each State Society proceed with the organization of separate State Societies of Engineers-in-Training. The intent of all this is excellent. I wonder if the method is so good.

It appears to me that the majority who pass the State Examination and become Engineers-in-Training will be beyond twenty-five years of age and their vote and influence will be as likely to be beneficial as otherwise. On the whole my contention is that they will be a leavening agency in the Society and keep the older members on their toes, so they will not die of dry rot as so often happens in sheltered or protected organizations or groups."

Ed. Note: Very few, if any, persons will be beyond twenty-five years of age when they become Engineers-in-Training. Two Examinations, producing 71 Engineers-in-Training, have been held in New York. None of the successful candidates is more than twenty-two and some, only twenty were permitted to take the examination. These latter must wait till they are twenty-one to receive their certificates as Engineers-in-Training. It is expected that practically all Engineers-in-Training will have qualified as Professional Engineers by the time they reach the age of twenty-five. This also applies to candidates in other states where the Engineer-in-Training program is being developed. There is no analogy between the professional type of organization, such as the American Bar Association, the American Medical Association, and the National Society of Professional Engineers, and the several technical engineering societies. So far as attendance and participation in meetings are concerned the *Engineer-in-Training organization set-up* provides for all the opportunities of other proposals and in addition permits of control of finances and individual opportunity for the young man, even to the extent of independent economic endeavor, not possible in an organization of professional and pre-professional or employer and employee members, if the young man so desires.

TEXAS

For Professional Unity

With the above caption the March-April issue of the Texas Engineer presents a most impressive publication to its readers. The most attractive cover contains the following notes:

"The Texas Society of Professional Engineers resolves to solve employment problems of Professional Engineers and Engineers in Training by means of a strong Professional Organization without the formation of bargaining groups.

The T.S.P.E. has legal counsel available without cost to any Professional Engineer or Engineer in Training in need of such services in connection with his or her employment problems.

The T.S.P.E. will vigorously promote universal use of its adopted Schedule of Fees and Salaries to the end that every engineer shall receive adequate compensation for his services."

President's Comments

"And Having Eyes, See Ye Not?
And Having Ears, Hear Ye Not?"

"The Professional Engineer should ponder the above quotation, then compare the engineer with other professional men, the Lawyers and Doctors.

The Doctors, though they be eye specialists, baby specialists, or brain specialists, etc., have coordinated themselves into one strong National Association, 'The American Medical Association.' Then look at the Lawyers, though they be Criminal Attorneys, Civil Attorneys, Corporation Lawyers, they have one coordinated group, 'The American Bar Association.'

This coordination into one professional group has been successful. By numbers they have strength. Each association maintains a representative in our National Capital, and in each State Capital during the terms of the State Legislature; and by this means they have been exempted by name from the Wagner Act, and the Wages and Hour Law, and many other acts.

The Professional Engineers have finally formed a similar coordinated group of all Registered Engineers known as the National Society of Professional Engineers.

It shall be my aim as President of Texas Society of Professional

Engineers to assist the local charter officers to secure sufficient new members in Texas to place the Professional Engineers and the T.S.P.E. on a parity with the Bar and Medical Associations in this State.

In numbers there is strength. If we have strength we can put into operation the splendid fourteen-point program as outlined on page 7 of the December issue of The Texas Professional Engineer.

Your President wholeheartedly endorses the Policies of T.S.P.E. as set out on the cover page of this month's issue of the Professional Engineer. Read and study these Policies. Engineers having eyes, See, and having ears, Hear.

May I urge you to fill out an application blank today and become a member of the T.S.P.E. This will in turn make you a member of the National Society, the State Society, and a member of your local chapter. We are now about eighty years late in forming an association as compared to the Doctors and Lawyers. Let's organize a local chapter in or near your city. I will help you.

Now let me tell you that the Texas State Board of Registration for Professional Engineers has registered to date approximately 5,500 engineers in Texas and has seen fit not to register approximately 1,100 who applied for registration as Professional Engineers. This was the first major step toward raising the standards and ethics of the Engineering Profession in this state. A second major step should be the formation of a strong coordinated organization of all the Registered Engineers which is known as the National Society of Professional Engineers.

Again I say, fill out your application for membership Today. If you are already a member, get another engineer to make application for membership.

"Forward March, Engineers!" *A. H. Mitchell President*

From the Editor of the American Engineer to the Publicity Committee of the Texas Professional Engineers: — Please place one on your mailing list. A copy of the March-April issue came to hand most indirectly.

Professional Organizations

No Engineer Union Needed

Employment Policies of T.S.P.E.

(From the Texas Society of Professional Engineers)

The following which appeared in a recent issue of the official publication of the Texas Society indicates the positive stand taken by that organization on the subject of collective bargaining practices:

"Texas engineers are agreed almost unanimously that they do not need an engineers union to solve their employment problems. This conclusion is drawn from a survey recently conducted by the Texas Society of Professional Engineers. Over ninety per cent of the Licensed Professional Engineers who answered a questionnaire were opposed to unions for engineers. The results of this survey were construed by the Board of Directors of the Texas Society of Professional Engineers as being a mandate to devise some alternative which would be compatible with the wishes of Texas engineers. They, then, had made a comprehensive survey of all labor legislation and upon the advice of competent counsel prepared and unanimously adopted the following:

The Texas Society of Professional Engineers resolves to solve employment problems of Licensed Professional Engineers and engineers-in-training by means of a strong professional organization without formation of bargaining groups.

The question might well be asked, How can they do this?

Inform Chapters

A comprehensive analysis of the pertinent legislation is not so difficult as it first seems, and, in fact, is quite simple. After a few essential things have been done the whole problem resolves itself into the simple matter of determining what the engineer prefers. The first and primary essential is that engineers must have an organization representing all branches of the profession and that this organization shall have as one of its stated purposes the objective of being the organization responsible for the economic welfare of its members. The second essential is that the engineers must belong and actively support the organization. With these essentials accomplished, the problem of unionization can be met in any given case.

Suppose an engineer employed in Plant A should learn that there is a move on foot to organize the employees of Plant A into a union. What should this engineer do? He should immediately advise his Local Chapter of T.S.P.E. of the impending movement. If he and his fellow engineers employed in Plant A agree among themselves that they wish to be excluded from any union or bargaining group which may be formed in Plant A, they should do these things:

1) *Refrain from participating in any balloting for the purpose of determining whether or not there shall be a union in Plant A.*

2) *Refrain from joining or paying dues to any union or bargaining group.*

3) *Do nothing until they have requested and received advice from T.S.P.E.*

Upon receipt of notice of the impending organization of a union in Plant A, T.S.P.E. would then arrange for conferences with both labor and management, seeking to negotiate with them for the exclusion of engineers from the collective bargaining agreements which may be executed between labor and management. If management and labor both agree that the engineer in question should be excluded from the bargaining agreements, the problem is solved.

* * *

Appeal Procedure

If either labor or management, or both, disagree concerning the exclusion of engineers, T.S.P.E. would then appeal to the National Labor Relations Board for a decision. It is important to note two things in this respect: (1) that engineers holding professional positions can be represented before the NLRB by a professional organization containing employer members, if the purpose of their representation is for the exclusion of their members from bargaining agreements; (2) in the event that an appeal to the NLRB is necessary, the validity of their plea for exclusion will be decided on the basis of definitions contained in the pertinent laws.

* * *

Legal Counsel

The case is clear. If engineers agree that they do not wish to belong to a labor union, if they have a professional organization of the right kind, and, if they are members of that organization, they need not fear being forced against their will into labor unions. The Texas Society of Professional Engineers is that organization and fulfills all the necessary requirements to represent the professional engineer in employment problems. The membership is open to every licensed engineer and every engineer in training in the State of Texas.

* * *

"The T.S.P.E. has legal counsel available without cost to any Professional Engineer or Engineer in training in need of such services in connection with his or her employment problems."

The Texas Society of Professional Engineers is not opposed to labor unions as such, and it firmly believes that such unions serve the welfare of a large labor group. The professional engineer, however, can best serve the public, management and labor by maintaining high professional standards and solving his employment problems through a professional organization that thoroughly understands them.

Equitable Pay

The Texas Society of Professional Engineers is fully aware that just and equitable fees and salaries, comparable to those of other professions, are essential for the professional advancement of the engineer. This has been clearly stated in a third policy adopted unanimously by the Board at its recent meeting.

"The T.S.P.E. will vigorously promote universal use of their adopted schedule of fees and salaries to the end that every engineer shall receive adequate compensation for his services."

Other professional organizations are improving the economic welfare of their members without resorting to labor unions. With the need and desire to be on a professional plane, the engineer does not find labor unions to be the solution of his problems. The T.S.P.E. confidently believes that its adopted policies, if properly supported, will be fully realized and all professional engineers and the public will be benefited from such action.

One Hundred Years

(*Continued from Page* 10)

States who do not receive the benefits of medical and hospital facilities for one reason or another. But that is a social and economic, rather than a scientific problem, and medicine shares with many other agencies, including the government, in the failure, thus far to solve all social problems of unemployment, ignorance and want. I am confident, however, that the medical profession is fully awake to the necessity for finding sound answers to these problems as they relate to the distribution of medical services. Experiments in pre-payment plans for meeting the costs of medical service are being carried on under medical society sponsorship in many parts of the country. They are being studied carefully and will be instituted with the whole-hearted backing of the physicians where they are needed and when the return of our members who are now scattered all over the world with the fighting forces make such expansion possible. In the meantime, the Minnesota State Medical Association and many other state medical societies, are making careful studies through their post-war planning committees, of both medical and hospital needs in their states. It is their object to relocate returning physicians, on the basis of population and transportation facilities, where they are needed most, so that complete facilities for the care of the sick may be easily available anywhere in the state. I believe that sound solutions to these problems are likely to be found without sacrificing the quality of service if we are allowed the same freedom of action in this field that we have enjoyed in the field of scientific development.

I am certain that government control over medical practice, education and research, such as is proposed in legislation now before Congress, would destroy the quality and do nothing significant to extend the benefits. It is, perhaps, a question of whether you want the kind of medicine which now serves the great majority of people well and is steadily extending its services to all. Or inferior medicine which is levelled off at the top and shoddy at the seams but suddenly spread out in theoretic abundance by legislative fiat. I do not have to ask what the answer of a professional group, such as this one, would be to that question. In fact, I understand that the profession of engineering is also threatened at the present time by legislation comparable to the Wagner-Murray-Dingell bill and that your own independent professional status would be taken away if the Kilgore bill, now before Congress, were to pass.

I know of no better way to protect yourselves and your profession than by strong organization, by taking into your own hands the leadership and responsibility for maintaining standards of education, training and practice for your profession and by protecting the public against engineering quacks and frauds.

It is clear that none of us who practice in the learned professions may bury ourselves in our professional and scientific concerns and expect to retain our freedom to work. On the other hand, by a strong organization, a keen realization of social needs as they affect our work and a wise policy in behalf of the public good, I believe we, in America, can and will protect our professional freedom and avoid becoming clerks in a bureaucratic machine.

To that end, I would suggest, if I may, that your organization look carefully into the standards required for graduate engineers at the University; that you take immediate steps, if you have not done so already, to see that your licensing board has the funds and machinery to protect those standards and prevent engineering practice by men who are not qualified for their work; that you exercise a control through membership in your society which will hold all to a high standard of ethics and efficiency and that your public policy be dictated, not by your own advantage, but by the public good.

Public And Private Architects

(*Continued from Page* 14)

prevent the employment of private architects in connection with the post-war program have been rejected. The writer believes this post-war program have been rejected. The writer believes this decision to be a healthy one for all concerned.

"Recently the Executive Committee of the New York Chapter of the A.I.A. defined its conception of the function of the Architectural Bureau as follows: Quotation 'A':

'To gather statistical data and act as a clearing house and correlating agency for information.

'To conduct research.

'Determination of construction needs.

'Preparation of programs for projects.

'Establishment of standards for the information of those preparing plans and as a basis of comparison for alternative methods."

The Committee then goes on to state:

"Government agencies normally are unable to draw the outstanding members of the profession" and "in design matters, the Bureau should be limited to 'preparation of plans, letting of contracts, supervision of construction for maintenance and minor alteration work'."

"The Committee's recommendations are contradictory and unrealistic in the following regards:

"The proper realization of duties outlined under Quotation 'A' calls for a breadth of experience and architectural judgment of a high order. The Committee does not state how this is to be achieved by staffs qualified merely for 'alterations and minor work.'

"It would seem from such inconsistent statements that the private architect wishes all the large jobs to be carefully nursed through the embryonic stages and turned over when the project is nicely crystalized in program form for one of the 'outstanding members of the profession' to wrap up in a nice parcel.

"The adoption of such a policy would, I am convinced, be a boomerang to the detriment of the private architect.

"Only by the opportunity for challenging design work can competent architects be induced to seek employment in architectural bureaus. Remove this incentive, and the bureau reverts from a creative agency to a bookkeeping machine. Programs and projects will then become narrower in conception and many will die 'aborning' for lack of the comprehensive design approach.

"Should this occur, the private architect may conceivably receive fewer projects than when a more healthful design organism exists in the bureau.

"Civil Service and private architects should cease this bickering and maneuvering for the ousting of each other, and concentrate jointly their proper professional functions of meeting the ever-expanding needs of a modern society, implementing each other in their interlocking functions, while maintaining a healthy and constructive rivalry in others. By mutual effort, new realms of social and professional research and service may unfold, redounding not only to the credit of the profession but to the welfare and satisfaction of the taxpayer."

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The Road To Peace

(*Continued from Page* 11)

world will turn their laboratories over to the study of God and prayer and the spiritual forces which as yet have been hardly guessed at. When that day comes the world will see more advancement in one generation than it has seen in the past four."

Professor Michael I. Pupin, also one of the greatest of the world's scientists, who has made possible modern long-distance telephony, the radio and many other valuable contributions to the world's progress, found a similar inspiration from his life work in the following words given to the public:

"If there is a taint of materialism in this power age, do not charge it against the sciences which have discovered the various forms of power and have developed them for mankind. Blame it against the spiritual unpreparedness of mankind to enjoy these gifts that have been brought through power. Blame political science, sociology, psychology and theology for not teaching mankind that there are spiritual powers in the human heart, and direct men to employ their spiritual powers for the good of mankind, as science has done with physical powers."

I also came across the following interesting statement by Benjamin Franklin, in a letter to Dr. Priestley, February 8, 1770:

"The rapid progress true science now makes occasions my regretting sometimes that I was born too soon. It is impossible to imagine the heights to which we may be carried in a thousand years, the power of man over matter . . . All diseases may by sure means be prevented or cured, not excepting even that of old age, and our lives lengthened at pleasure, even beyond the antediluvian standard. Oh, that the moral sciences were in as fair a way of improvement, that men would cease to be wolves to one another and that human beings would at length learn what they now improperly call humanity."

This statement clearly indicates how much Dr. Franklin would oppose modern dictatorships.

Recently, attending the popular movie depicting the life of Mme. Curie, the inventor of radium, I found that she made the following statement at the time she was awarded the Nobel Prize:

"We have made many discoveries. Pierre Curie, in the suggestions we have found in his notes and in thoughts he expressed to me, has helped to guide us to them. But not one of us can do much, yet each of us, perhaps, can catch some gleam of knowledge, which modest and insufficient of itself, may add to man's *dream of truth*. It is by these small candles in our darkness that we see before us, little by little, the dim outline of that great plan that shapes the universe. And I am among those who think that for this reason, *science has great beauty, and with its great spiritual strength* will in time cleanse this world of its evils, its ignorance, its poverty, diseases, wars and heartaches."

Present conditions would seem to indicate that the great material progress the world over will need the spiritual advance referred to in the quotations above before mankind can expect the freedom that the *Declaration of Independence* and the *Bill of Rights* have guaranteed to Americans.

Honest consideration of whatever lasting progress, individual or national that has been attained this far will convince those who will stop, look and listen, that only through application of spiritual values may we expect to go forward to higher and higher lasting attainments.

Does not the downfall of Hitler's atheism indicate that spiritual education must be of prime importance in rebuilding the world? Shall this not begin and prevail at the peace table? Let us now so fortify ourselves individually and collectively that a breach of "The Golden Rule" by one will be considered an attack upon the welfare of all, and bring well-directed reprisals by organized society of nations!

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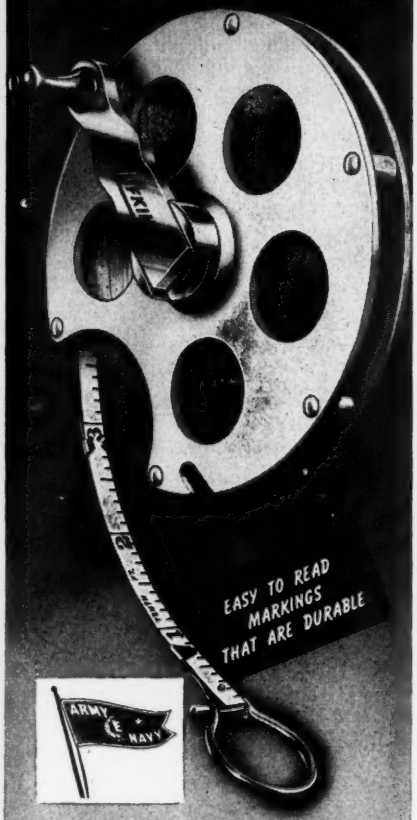

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WHAT'S NEW

And Coming In The Whirl of Change

(News from industry — gathered by the publisher)

ENGINEERS SHOULD TAKE AN INTEREST IN THE METRIC SYSTEM

By LOUIS ELLIOTT
Consulting Mechanical Engineer

It is important to every man, woman and child in the country that the ordinary units of length, volume and weight be simple and convenient, permitting easy understanding and use. This is the case even though the average person uses relatively few units of weight and measure, and his calculations of quantities, expressed in these units, are usually quite simple. Men engaged in industrial and commercial transactions must deal in a much more thoroughgoing way with the units for expressing length, bulk and weight, and must perform many calculations involving these quantities and their inter-conversion.

As to engineers, most of their activities involve measurement and computation of physical quantities. It is therefore of prime importance to them that there be in use a system of weights and measures consisting of well-selected units, with convenient relations between them — giving maximum ease in conversion and in all calculations. The system should also make possible convenient computation of mass or weight from volume, and the reverse.

The writer therefore suggests to engineers that they give consideration to the advisability of the adoption of the metric system by this country, so that they will be prepared to take a position when and if the proposal is presented. Meanwhile, they might take opportunity to promote discussion of the problem.

Present Use of Metric Measures

The decimal system of weights and measures has been adopted by practically all countries in the world except the United States and the British group. There is therefore a barrier in dealing, in commercial and other transactions, between the English-speaking peoples of the world and most others, and this situation suggests the desirability of unifying practice throughout the world.

Present uses of metric weights and measures in the United States include the following: by U. S. Coast and Geodetic Survey in basic triangulation survey of the country; partially, by a number of Federal bureaus and by U. S. Army in design of armament; in whole or in part by many important firms in manufacturing processes — at the present time especially in fabrication of war matériel; generally, in laboratory and other scientific practice; by many physicians in prescribing medicines, and hence in pharmacies; exclusively, in electrical measurements; in international and certain other athletic events.

Characteristics of Metric System

The metric system of weights and measures includes units designed to meet all needs for measuring, recording and calculating physical quantities, simply and conveniently. The few basic units listed below are sufficient for practically all ordinary requirements.

Measures of	*Full Names*	*Abbreviations*
Length	millimeter	mm
	centimeter	10 mm = 1 cm
	meter	100 cm = 1 m
	kilometer	1000 m = 1 km
Volume or Capacity	milliliter	ml
	liter	1000 ml = 1 l
Weight	milligram	mg
	gram	1000 mg = 1g
	kilogram	1000 g = 1 kg
	ton	1000 kg = 1 ton

The ratio between any two successive metric units in a series is 10, conforming with the decimal number system in universal use — which is also the basis of United States currency. Arithmetic operations are therefore very simple. In the metric system there is only one series of units for length, one for volume or capacity, and one for weight. The basic units in everyday practice are the *meter* for length, the *liter* for volume and the *kilogram* for weight.

The common metric measures of length are the millimeter for small dimensions and accurate work, the centimeter for practical use in many ways, the meter for expressing dimensions of larger objects and short distances, and the kilometer for longer distances. (The millimeter is equivalent to about one twenty-fifth of an inch and the centimeter to four-tenths of an inch; the meter is about a tenth larger than the English yard; the kilometer is a little over six-tenths of a mile.)

For volume or capacity, dry or wet, by far the most common and convenient metric unit is the liter, utilized for ordinary small and moderate-sized measures, as in retail trade that calls for volume measurements. (The liter is about 5 per cent larger than the U. S. Liquid quart and 10 per cent smaller than the dry quart.) For larger volumes — e.g., of gravel or concrete, the cubic meter is convenient. For chemical and other scientific work, the milliliter is the ordinary unit.

For expressing weights in ordinary usages and transactions, the kilogram is the convenient metric unit. (This is about equal to two and two-tenths avoirdupois pounds.) For greater weights, such as would be used in sales at wholesale and in shipments, the metric ton is utilized, equal to 1000 kg. (It is about one-tenth

larger than the English short ton and approximately the same as the English long ton.) In pharmaceutical, chemical and general scientific work, the gram is the convenient unit of weight. (It is equal to about one-thirtieth of an avoirdupois ounce.)

A *very convenient* relation of the units of volume or capacity and weight is that a liter of pure water, at standard temperature and pressure, weighs one kilogram, and a milliliter weighs one gram. This relation makes it easy to determine with high accuracy the weight of any volume of water, or of any other material if its specific gravity is known. Problems involving water flow and water power can be solved simply, using metric measures. For all practical purposes (— within less than one part in ten thousand), the milliliter is the same as the cubic centimeter and the liter is equal to 1000 cc (— a cube 10 cm on a side).

Characteristics of English System

English weights and measures, which have been adopted in large part by American practice, have come up from primitive times by a process of unregulated development — resulting in troublesome inconsistency as between various units and groups of units. While many of the individual units are of convenient size and are used effectively in general or specialized applications, the "system" as a whole is a hodgepodge. There are particular sets of units for general uses, and for individual trades or industries; between these sets there is no convenient relation or coordination. Although repetition of facts known may be dull, the writer ventures, in the next paragraph, to "call the roll"—a partial roll—of the English units.

The more familiar English units of length are the mile, the yard, the foot and the inch, but there are many others, used more or less for various purposes, including furlong, rod, fathom, span, hand, line and point. There are three kinds of mile — the statute, U. S. nautical and international nautical. The unit board-foot is used for lumber, and the cord for wood. Capacity is commonly measured in pints, quarts, pecks, bushels and barrels of dry measure; all these contain irregular numbers of cubic inches or feet. Units of wet measure include gills, pints, quarts, gallons and barrels; these also contain irregular numbers of cubic inches or feet, and there is no simple relation between their volumes and the corresponding weights of water. There are two sizes of pint, three quarts, two gallons, three or four bushels, and several dry-measure and wet-measure barrels. Liquid measures also include, for pharmaceutical and similar uses, the minim, dram and ounce. There are two major systems of weights, one the avoirdupois for ordinary use and another the apothecary or troy. The former includes grains, drams, ounces, pounds, hundredweights (short and long), and tons (short and long); in the troy series are grains, scruples, pennyweights, drams, ounces and pounds. There are therefore three different ounces, two sizes of pound, and two different English or American tons.

In the English system there is no one common relation between units of any one series, although the ratios are often some multiple of 2, such as 2, 4, 8, 12 and 16. Sometimes a unit is subdivided into fractions, by successive halving, obtaining for instance for the inch, the series ½, ¼, ⅛, $\frac{1}{16}$, $\frac{1}{32}$ and $\frac{1}{64}$. These relations and practices mean much labor in carrying on calculations, particularly as quantities are frequently expressed in terms of two or more units — such as feet and inches, or pounds and ounces. For instance, the addition of a considerable number of dimensions, expressed in feet, inches and fractions, to make up an overall dimension, is quite laborious, whereas the addition of equivalent dimensions expressed in millimeters is simple. Individual English units may be decimalized; this is done, in a few applications, with some of the convenient units in common use, but the relations between different units are still irregular.

The statement is sometimes made that English units of length are more convenient in magnitude than the metric — that the foot is more convenient than the meter, and the inch than the centimeter or the millimeter. It is the writer's opinion that there is little to this argument, and that

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convenience in use comes in very large measure from constant practice.

Possible Adoption of Metric Measures by U. S. A.

There has been active controversy as to relative advantages of the English and metric systems, advocates of one or the other frequently taking extreme viewpoints. It is true that the United States and England "get along" — quite successfully — with the present "system", selecting the unit or units in each series most convenient for a particular use, decimalizing them if necessary, and minimizing—by long practice — the awkwardness in conversion as between units in one series or as between units of volume and weight.

It is realized that conservatism of engineers and others in this country, attachment to the English system of measures, and long familiarity with its use — which means ability to get definite conceptions of values expressed in that system, make difficult any large-scale introduction of metric weights and measures in the United States.

Perhaps the most important opposition to the proposed introduction of decimal weights and measures in this country has come from manufacturers, who have taken the position that conversion from English to metric units would impose an undue burden upon them. However, a number of important manufacturers are now working in whole or in part to metric measures, particularly in making war matériel.

No system of measures represents perfection for all users, but the metric, of all those used or devised, appears to be the best. It places all units of measurement on the same basis as the natural number system. The writer believes that the simplicity of the metric system renders it economical and of general advantage for all the common activities involving use of weights and measures, and in manufacturing and commerce. Its adoption by the United States and the other English-speaking countries would mean practically uniform practice in this respect throughout the world. This would be particularly advantageous in world trade.

In a changeover from English units to metric, some confusion would doubtless result. There would be a period during which both systems would be used — until the metric should in large measure supersede the English. As an example, English units of length would doubtless persist for a long time in dimensioning tracts of land — particularly the smaller subdivisions. However, in spite of a period of inconvenience it is believed that within a few years the change would be in great measure completed, and the conflicts and difficulties largely done away with.

Ease of changeover would be promoted by the early use in trade of a few common metric measures, of magnitude within 5 to 10 per cent of the English unit superseded: for instance, the meter could take the place of the yard, the liter of the quart, and half a kilogram or 500 grams would be substituted for the pound. Adoption of decimal measures in domestic and foreign commerce could be followed later by their use in manufacturing, as shops and factories should find it economical to convert.

The writer is connected with an engineering organization that has for many years been making designs for power stations and other structures, utilizing metric units in specifications and drawings. These designs have been utilized for construction in South and Central America, in Russia, and elsewhere. This practice must be followed for projects in foreign countries in which metric utilization is standard practice and is required by law. Experience shows that engineers and draftsmen, even if possessing no previous experience with metric units, can accustom themselves readily to the use of that system. Other important engineering companies have had similar experience, finding that no real difficulty is experienced in the drafting room in making plans to the

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If a change in metric practice is ever to take place in this country and in England, the time immediately following the war appears to be the most favorable. A very large number of men, in the armed forces and in manufacturing and other industries in this country, will be more or less familiar with metric measures.

It appears plain that there would be an advantage to American manufacturers, sales concerns and engineers, who supply equipment or service to Latin-American and certain other countries, in the adoption of the metric system for such work, conforming with local legalized and approved practice with respect to weights and measures. One of the advantages that German and other European competition has had during past decades in South America is that goods, engineering equipment and structures, as well as services, have been supplied on the basis known and desired by the customers. Once American firms should discover that it is profitable to follow similar practices, the revised standards could be adopted without great difficulty. This is indicated by the ability of American manufacturers to produce guns and other war matériel to metric measures, and indeed by the current utilization of metric standards by many concerns in this country.

The outlook for keen competition with Europe for Latin-American trade, after the termination of the present conflict, indicates that United States manufacturers, technicians and governmental authorities should make early plans for placing this country in a favorable position to trade. Widespread adoption of the metric system of weights and measures would be a favorable factor in this coming struggle. It would contribute to good understanding with clients and customers, and would be a tangible contribution to "good-neighbor" policies.

The Metric Association has been working quietly for nearly 30 years, in the attempt to promote familiarity with metric measures, and to educate the public in the advantages of the decimal system. This work has been carried on with the sole objective of bringing to the country the advantages that would ultimately accrue through adoption of the metric system. A pamphlet is to be brought out in the near future by the Metric Association, and the writer has taken the liberty, in this article, of utilizing certain of the material prepared for that issue.

CALIFORNIA

San Leandro Company Starts Post War Effort

Carl M. Friden, President of the Friden Calculating Machine Company, whose general offices and plant are located in San Leandro, California, announces that his company has acquired a five story building at 336 Madison Avenue, New York City, which has been renamed the "Friden Building." The entire building will be used as headquarters for the New York Branch Office.

The demand for Friden Automatic Calculators has increased so rapidly each month for the last five years that it has become necessary to increase the number of Sales Agencies and enlarge the staff of sales, instructional, and service personnel in the field. One of the first steps toward this end was the establishment of an Eastern Field Management which maintains a close supervision over the activities of all the territory east of the Mississippi River and south of Wisconsin.

The Field Management Offices are in the Friden Building which also includes a Company operated service training school, a sales training school for sales agents, salesmen, and instructors; a modern streamlined show room, demonstration rooms, and Sales Offices for the New York City sale and service staff.

L. B. Taylor, recently appointed Fiel Manager, has had twenty-five years of suc cessful selling experience in the Calculato business, including many years as Divisio Sales manager of the Monroe Calculatin Machine Company. This experience make Mr. Taylor well qualified to carry on hi new work.

The Friden Company is now celebratin its Tenth Anniversary. A pictorial and fa tual story of the amazing growth an achievements of this California Compan is contained in a thirty-six page, Tent Anniversary Number of the Friden "Ari tocrat," House Organ of the General Sale Department. Copies of this book will b furnished free of charge to anyone wri ing the Company at San Leandro.

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